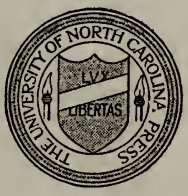
MARCH, 1934 NUMBER 288

THE UNIVERSITY OF NORTH CAROLINA RECORD

THE ONE HUNDRED AND FORTIETH SESSION



CATALOGUE ISSUE

1933-1934

Announcements for the Session

1934-1935

THE UNIVERSITY OF NORTH CAROLINA PRESS
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CHAPEL HILL, N. C.

MARCH, 1934 NUMBER 288

THE UNIVERSITY OF NORTH CAROLINA RECORD

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CATALOGUE ISSUE
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THE UNIVERSITY OF NORTH CAROLINA PRESS
CHAPEL HILL, N. C

CATALOGUE OF EVENTS

SESSION, 1934-1935

1934	
June 10-12	*Sunday through Tuesday.* Commencement Exercises.
June 13-July 24	Summer Session, First Term.
June 13-July 21	Summer School of Law, First Term.
July 25-August 31	Summer Session, Second Term.
July 23-August 29	Summer School of Law, Second Term.
Sept. 17	*Monday.* Entrance Examinations.
Sept. 17-18	*Monday and Tuesday.* Examinations to remove condition grades.
Sept. 17-20	*Monday through Thursday.* Freshman Week.
Sept. 19	*Wednesday.* Registration of Freshmen for the fall quarter.
Sept. 20	*Thursday.* Registration (all except Freshmen) for the fall quarter.
Sept. 21	*Friday.* Class work for the fall quarter begins.
Oct. 12	*Friday.* University Day.
Nov. 28	*Wednesday.* Thanksgiving Recess begins (1:00 p.m.).
Dec. 3	*Monday.* Thanksgiving Recess ends (8:30 a.m.).
Dec. 11-20	*Tuesday to 1 p. m. Thursday of following week.* Registration for the winter quarter.
Dec. 17-20	*Monday through Thursday.* Examinations for the fall quarter.
Dec. 20 (afternoon)-Jan. 2, 1935	Christmas Recess.
1935	
Jan. 3	*Thursday.* Registration of new students. Class work for the winter quarter begins.
Jan. 5	*Saturday.* Classes as if Tuesday.
Jan. 26	*Saturday.* First term of the School of Law ends.
Jan. 28	*Monday.* Second Term of the School of Law begins.
Feb. 1	*Friday.* Candidates for the Mangum Medal announce their subjects to their respective Deans.
Mar. 8-16	*Friday to 1 p. m. Saturday of following week.* Registration for the spring quarter.
Mar. 13-16	*Wednesday through Saturday.* Examinations for the winter quarter.
Mar. 16-24	*Saturday afternoon through Sunday.* Spring Recess.
Mar. 25	*Monday.* Registration of new students. Class work for the spring quarter begins.
May 1	*Wednesday.* Selection of Commencement Orators.
June 3-6	*Monday through Thursday.* Examinations for the spring quarter.
June 9-11	*Sunday through Tuesday.* Commencement Exercises.

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PART ONE—OFFICERS

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OFFICERS OF ADMINISTRATION
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FREDERICK ISLER SUTTON	Lenoir

† The legal term of office expires April 1st of the year indicated. * Deceased.

†1937

JOHN WILL AIKEN	Catawba
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*ROBERT NEWTON PAGE	Moore
CHARLES WALTER TILLETT, JR.	Mecklenburg
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FRANCIS DONNELL WINSTON	Bertie

†1939

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GEORGE LAFAYETTE LYERLY	Catawba
ISAAC MELSON MEEKINS	Pasquotank
WILLIAM DANIEL MERRITT	Person
WALTER MURPHY	Rowan
HAYWOOD PARKER	Buncombe
MRS. KATE B. REYNOLDS	Forsyth

† The legal term of office expires April 1st of the year indicated. * Deceased.

HENRY MOORING ROBINS	Randolph
WILLIAM THOMAS SHORE	Mecklenburg
LAWRENCE SPRUNT	New Hanover
CLINTON WHITE TOMS, SR.	Durham
CHARLES WHEDBEE	Perquimans
WILLIAM COLEMAN WOODARD	Nash
WILLIAM H. WOOLARD	Pitt

†1941

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WILLIAM TUCKER HANNAH	Haywood
R. L. HARRIS	Person
ROBERT EUGENE LITTLE	Anson
ANGUS WILTON MCLEAN	Robeson
MRS. LILY C. MOREHEAD MEBANE	Rockingham
CAMERON MORRISON	Mecklenburg
HARRISS NEWMAN	New Hanover
CLARENCE POE	Wake
MISS EASDALE SHAW	Richmond
JAMES FRANKLIN SPRUILL	Davidson
MRS. MAY LOVELACE TOMLINSON	Guilford
IRVIN BURCHARD TUCKER	Columbus
JOHN KENYON WILSON	Pasquotank
GRAHAM WOODARD	Wilson

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JOHN CHRISTOPHER BLUCHER EHRINGHAUS, *ex officio*, Chairman
HENRY MAUGER LONDON, *ex officio*, Secretary

‡1934: MRS. LAURA WEIL CONE, MISS EASDALE SHAW, HAYWOOD PARKER.

‡1936: JOSEPHUS DANIELS, CLARENCE POE, IRVING B. TUCKER.

‡1938: CHARLES WHEDBEE, S. B. ALEXANDER, LESLIE WEIL.

‡1940: JOHN SPRUNT HILL, WALTER MURPHY, JOHN J. PARKER.

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* Deceased. † The legal term of office expires April 1st of the year indicated.
‡ Term expires.

OFFICERS OF ADMINISTRATION

THE CONSOLIDATED UNIVERSITY

Frank Porter Graham, M.A., LL.D., D.C.L., Litt.D., *President.*
Charles Thomas Woollen, *Comptroller.*

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Dr. Allan Wilson Hobbs
Prof. Robert Digges Wimberly Connor
Dr. George Howe
Dean William Whatley Pierson, Jr.
Dr. Edgar Wallace Knight
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Dr. Robert Franklin Poole
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Dean Benjamin Franklin Brown
Dr. Zeno Payne Metcalf
Dr. Julius I. Foust
Dr. Benjamin B. Kendrick
Dr. Helen Barton
Prof. Harriet Wiseman Elliott
Prof. Ruth Fitzgerald

THE UNIVERSITY

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President of the Consolidated University.*
Charles Thomas Woollen, *Comptroller of the Consolidated University.*
Allan Wilson Hobbs, Ph.D., *Chairman of the Faculty.*
Robert Burton House, A.M., *Executive Secretary and Secretary of the Faculty.*
Thomas James Wilson, Jr., Ph.D., *Dean of Admissions and Registrar.*
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Mrs. Marvin Hendrix Stacy, *Adviser to Women.*
Robert Allison Fetzer, B.S., M.A., *Director of Athletics.*
Julius Algernon Warren, *Treasurer and Bursar.*
Livingston Bertram Rogerson, *Auditor.*
George Kenneth Grant Henry, Ph.D., *Assistant Registrar.*
Ben Husbands, A.B., *Assistant Registrar.*

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William Whatley Pierson, Jr., Ph.D., *Dean of the Graduate School.*
Maurice Taylor VanHecke, J.D., *Dean of the School of Law.*
Charles Staples Mangum, A.B., M.D., *Dean of the School of Medicine.*
John Grover Beard, Ph.G., Ph.M., *Dean of the School of Pharmacy.*

JAMES MUNSIE BELL, Ph.D., *Dean of the School of Applied Science.*
*HERMAN GLENN BAITY, Sc.D., *Dean of the School of Engineering.*
DUDLEY DEWITT CARROLL, M.A., *Dean of the School of Commerce.*
SUSAN GREY AKERS, Ph.D., *Acting-Director of the School of Library Science.*
WALTER CLINTON JACKSON, B.S., LL.D., *Dean of the School of Public Administration.*

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EDGAR RALPH RANKIN, A.M., *Head, Department of School Relations.*
WILLIAM JOHN MCKEE, C.E., Ph.D., *Head, Department of In-Service Teacher Training.*
LOUISE MANNING VENABLE, A.B., *Executive Secretary.*

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ROBERT BAKER LAWSON, M.D., *Director.*
GEORGE WALLACE CHANDLER, JR., *Assistant.*
JOHN LAWRENCE HODGES, *Assistant.*

PHYSICAL EDUCATION FOR WOMEN

GLADYS ANGEL BEARD, M.A., *Director.*

THE INFIRMARY

WALTER REECE BERRYHILL, A.B., M.D., *University Physician.*
EDWARD MCGOWAN HEDGPETH, A.B., M.D., *Assistant University Physician.*
EDNA WOMACK, *Registered Nurse.*
ELIZA JONES, *Registered Nurse.*

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

HARRY FULCHER COMER, M.A., *General Secretary.*
EDWIN SIDNEY LANIER, *Self-Help Secretary.*

* Absent on leave 1933-1934 in Federal Public Works Administration; his place is supplied by Professor William Jasper Miller as Acting-Dean.

OFFICERS OF INSTRUCTION

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
A.B., 1909 (North Carolina); M.A., 1916 (Columbia); LL.D. (Birmingham-Southern, Davidson); D.L.C. (Catawba); D.Litt. (Columbia).

Francis Preston Venable, Ph.D., D.Sc., LL.D., *Kenan Professor Emeritus of Chemistry.*
A.M., Ph.D., 1881 (Goettingen); LL.D. (Pennsylvania, South Carolina, Alabama, Jefferson); D.Sc. (Lafayette, North Carolina).

*Walter Dallam Toy, M.A., *Professor of the Germanic Languages and Literatures.*
M.A., 1881 (Virginia).

Henry Horace Williams, A.M., B.D., *Kenan Professor of Philosophy.*
A.B., A.M., 1883 (North Carolina); B.D., 1888 (Yale).

Henry VanPeters Wilson, Ph.D., *Kenan Professor of Zoölogy.*
A.B., 1883, Ph.D., 1888 (Johns Hopkins).

Collier Cobb, A.M., D.Sc., *Professor of Geology and Mineralogy.*
A.B., 1889, A. M., 1894 (Harvard); D.Sc. (Wake Forest).

Charles Staples Mangum, A.B., M.D., *Professor of Anatomy and Dean of the School of Medicine.*
A.B., 1891 (North Carolina); M.D., 1894 (Jefferson Medical College).

Marcus Cicero Stephens Noble, Pd.D., *Professor of Pedagogy.*
Student, 1875-1876 (Davidson); Student, 1877-1879 (North Carolina); Pd.D. (Davidson).

Isaac Hall Manning, M.D., *Professor of Physiology.*
Student, 1882-1886 (North Carolina); M.D., 1897 (Long Island College of Medicine).

George Howe, Ph.D., *Professor of the Latin Language and Literature.*
A.B., 1897 (Princeton); A.M., Ph.D., 1903 (Halle).

Nathan Wilson Walker, A.B., Ed.M., *Professor of Secondary Education and Director of the Summer School.*
A.B., 1903 (North Carolina); Ed.M., 1921 (Harvard).

William deBerniere MacNider, M.D., *Kenan Research Professor of Pharmacology.*
M.D., 1903 (North Carolina).

William Chambers Coker, Ph.D., LL.D., *Kenan Professor of Botany.*
B.S., 1894 (South Carolina); Ph.D., 1901 (Johns Hopkins); LL.D., (South Carolina).

* Deceased.

ARCHIBALD HENDERSON, Ph.D., D.C.L., LL.D., *Kenan Professor of Mathematics.*
A.B., 1898, A.M., 1899, Ph.D., 1902 (North Carolina); Ph.D., 1915 (Chicago); D.C.L. (University of the South); LL.D. (Tulane).

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph.D., *Kenan Professor of American History and Government.*
M.A., 1900 (University of the South); Ph.D., 1906 (Columbia).

HENRY MCGILBERT WAGSTAFF, Ph.D., *Professor of History.*
Ph.B., 1899 (North Carolina); Ph.D., 1906 (Johns Hopkins).

WILLIAM MORTON DEY, Ph.D., *Professor of the Romance Languages and Literatures.*
B.A., M.A., 1902 (Virginia); A.M., 1904, PhD., 1906 (Harvard).

ATWELL CAMPBELL MCINTOSH, A.M., LL.D., *Professor of Law.*
A.B., 1881, A.M., 1887, LL.D. (Davidson).

ALVIN SAWYER WHEELER, Ph.D., *Professor of Organic Chemistry.*
A.B., 1890 (Beloit); A.M., 1897, PhD., 1900 (Harvard).

JAMES MUNSIE BELL, Ph.D., *Smith Professor of Chemistry and Dean of the School of Applied Science.*
B.A., 1902, M.A., 1905 (Toronto); Ph.D., 1905 (Cornell).

JAMES BELL BULLITT, A.M., M.D., *Professor of Pathology.*
A.B., 1894, A.M., 1895 (Washington and Lee); M.D., 1897 (Virginia).

THOMAS JAMES WILSON, JR., Ph.D., *Dean of Admissions and Registrar.*
A.B., 1894, A.M., 1896, PhD., 1898 (North Carolina).

*EUGENE CUNNINGHAM BRANSON, A.M., Litt.D., *Kenan Professor of Rural Social Economics.*
A.M., 1894 (Trinity); A.M., 1899 (Peabody Normal); Litt.D. (Georgia).

DUDLEY DEWITT CARROLL, M.A., *Professor of Economics and Dean of the School of Commerce.*
A.B., 1907 (Guilford); A.B., 1908 (Haverford); M.A., 1915 (Columbia).

FREDERICK HENRY KOCH, A.M., *Kenan Professor of Dramatic Literature.*
A.B., 1900 (Ohio Wesleyan); A.M., 1909 (Harvard).

JOHN GROVER BEARD, Ph.G., Ph.M., *Professor of Materia Medica and Dean of the School of Pharmacy.*
Ph.G., 1909 (North Carolina); Ph.M., (Philadelphia College of Pharmacy).

JOHN EMERY LEAR, E.E., *Professor of Electrical Engineering.*
B.S. in E.E., 1901 (Virginia Polytechnic); E.E., 1909 (Texas Agricultural and Mechanical).

†EDGAR WALLACE KNIGHT, Ph.D., *Professor of Education.*
A.B., 1909, A.M., 1911 (Trinity); Ph.D., 1913 (Columbia).

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* Deceased.
† Absent on leave, 1933-1934.

William Frederick Prouty, Ph.D., *Professor of Stratigraphic Geology.*
B.S., 1903, M.S., 1904 (Syracuse); Ph.D., 1906 (Johns Hopkins).

Howard Washington Odum, Ph.D., LL.D., *Kenan Professor of Sociology.*
A.B., 1904 (Emory); A.M., 1906 (Mississippi); Ph.D., 1909 (Clark); Ph.D., 1910 (Columbia); LL.D. (Emory).

William Stanley Bernard, A.M., *Professor of Greek.*
A.B., 1900, A.M., 1904 (North Carolina).

John Manning Booker, Ph.D., *Professor of English.*
A.B., 1901 (Johns Hopkins); Ph.D., 1912 (Heidelberg).

Thomas Felix Hickerson, A.M., S.B., *Professor of Structural Engineering.*
Ph.B., 1904, A.M., 1907 (North Carolina); S.B., 1909 (Massachusetts Institute of Technology).

William Whatley Pierson, Jr., Ph.D., *Professor of History and Government and Dean of the Graduate School.*
A.B., 1910, A.M., 1911 (Alabama); A.M., 1912, Ph.D., 1916 (Columbia).

John Frederick Dashiell, Ph.D., *Professor of Psychology.*
B.S., 1908, B.L., 1909 (Evansville); A.M., 1910, Ph.D., 1913 (Columbia).

Francis Foster Bradshaw, Ph.D., *Dean of Students and Lecturer in Ethics.*
A.B., 1916 (North Carolina); M.A., 1926, Ph.D., 1930 (Columbia).

Sturgis Elleno Leavitt, Ph.D., *Professor of Spanish.*
A.B., 1908 (Bowdoin); A.M., 1913, Ph.D., 1917 (Harvard).

Robert Digges Wimberly Connor, Ph.B., *Kenan Professor of American History and Government.*
Ph.B., 1899 (North Carolina).

Kent James Brown, Ph.D., *Professor of German.*
A.B., 1901 (Dickinson); Ph.D., 1905 (Pennsylvania).

Claudius Temple Murchison, Ph.D., *Professor of Applied Economics.*
A.B., 1911 (Wake Forest); Ph.D., 1919 (Columbia).

Robert Ervin Coker, Ph.D., *Professor of Zoölogy.*
S.B., 1896, S.M., 1897 (North Carolina); Ph.D., 1906 (Johns Hopkins).

Marion Rex Trabue, Ph.D., *Professor of Educational Administration.*
A.B., 1911 (Northwestern); M.A., 1914, Ph.D., 1915 (Columbia).

George McFarland McKie, A.M., *Professor of Public Speaking.*
Graduate, 1898 (Emerson College of Oratory); A.B., A.M., 1907 (North Carolina).

Erle Ewart Peacock, A.B., M.B.A., C.P.A., *Professor of Accounting.*
A.B., 1914 (Georgia); M.B.A., 1916 (Harvard); C.P.A., State of North Carolina.

HARRY WOLVEN CRANE, Ph.D., *Professor of Psychology.*
A.B., 1909, A.M., 1910, Ph.D., 1913 (Michigan).

ARTHUR MELVILLE JORDAN, Ph.D., *Professor of Educational Psychology.*
A.B., 1907 (Randolph-Macon); A.M., 1909 (Trinity); Ph.D., 1919 (Columbia).

JOHN WAYNE LASLEY, JR., Ph.D., *Professor of Pure Mathematics.*
A.B., 1910, A.M., 1911 (North Carolina); Ph.D., 1920 (Chicago).

ALLAN WILSON HOBBS, Ph.D., *Professor of Applied Mathematics, Dean of the College of Liberal Arts, and Chairman of the Faculty.*
A.B., 1907 (Guilford); A.B., 1908 (Haverford); PhD., 1917 (Johns Hopkins).

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology.*
A.B., 1911, A.M., 1912, Ph.D., 1918 (North Carolina).

OTTO STUHLMAN, JR., Ph.D., *Professor of Physics.*
B.A., 1907 (Cincinnati); M.A., 1909 (Illinois); Ph.D., 1911 (Princeton).

GUSTAVE ADOLPHUS HARRER, Ph.D., *Professor of Latin.*
A.B., 1910, Ph.D., 1913 (Princeton).

ERICH WALTER ZIMMERMAN, Ph.D., *Professor of Commerce and Resources.*
Student, 1903-1907 (Düsseldorf); Ph.D., 1911 (Bonn).

ROBERT HASLEY WETTACH, A.M., LL.B., S.J.D., *Professor of Law.*
A.B., 1913, A.M., 1914, LL.B., 1917 (Pittsburg); S.J.D., 1921 (Harvard).

GEORGE COFFIN TAYLOR, Ph.D., *Professor of English.*
A.B., 1897 (South Carolina); A.M., 1899 (Harvard); Ph.D., 1906 (Chicago).

OSCAR JACKSON COFFIN, A.B., *Professor of Journalism.*
A.B., 1909 (North Carolina).

WILLIAM JOHN MCKEE, C.E., Ph.D., *Professor of Education in Extension Teaching.*
C.E., 1909 (Cornell); M.A., 1919, Ph.D., 1930 (Columbia).

EDWARD JAMES WOOODHOUSE, B.A., LL.B., *Professor of Government and Public Administration.*
B.A., 1903 (Randolph-Macon); LL.B., 1907 (Virginia).

ROBERT BURTON HOUSE, A.M., *Executive Secretary of the University and Secretary of the Faculty.*
A.B., 1916 (North Carolina); A.M., 1917 (Harvard).

ELMER GEORGE HOEFER, M.E., *Professor of Mechanical Engineering.*
B.S. in M.E., 1905, M.E., 1915 (Wisconsin).

WILLIAM FLINT THRALL, Ph.D., *Professor of English.*
A.B., 1901, A.M., 1902 (McKendree); A.M., 1915, Ph.D., 1920 (Chicago).

†Albert Coates, A.B., LL.B., *Professor of Law.*
A.B., 1918 (North Carolina); LL.B., 1923 (Harvard).

Urban Tigner Holmes, Jr., Ph.D., *Professor of French.*
A.B., 1920 (Pennsylvania); A.M., 1921, Ph.D., 1923 (Harvard).

Mitchell Bennett Garrett, Ph.D., *Professor of Modern European History.*
A.B., 1900, A.M., 1903 (Howard); Ph.D., 1910 (Cornell).

Millard Breckenridge, Ph.B., LL.B., *Professor of Law.*
Ph.B., 1917 (Chicago); LL.B., 1918 (Yale).

Frank Kenneth Cameron, Ph.D., *Professor of Chemistry.*
A.B., 1891, Ph.D., 1894 (Johns Hopkins).

Ernest Rutherford Groves, A.B., B.D., *Research Professor of Sociology.*
A.B., 1903 (Dartmouth); B.D., 1907 (Yale).

Harold Diedrich Meyer, A.M., *Professor of Sociology and Supervisor of Field Work.*
A.B., 1912, A.M., 1916 (Georgia).

English Bagby, Ph.D., *Professor of Psychology.*
A.B., 1913, A.M., 1914 (Princeton); Ph.D., 1918 (Johns Hopkins).

Wallace Everett Caldwell, Ph.D., *Professor of Ancient History.*
A.B., 1910 (Cornell); Ph.D., 1919 (Columbia).

Maurice Taylor VanHecke, Ph.B., J.D., *Professor of Law and Dean of the School of Law.*
Ph.B., 1916, J.D., 1917 (Chicago).

Henry Roland Totten, Ph.D., *Professor of Botany.*
A.B., 1913, A.M., 1914, Ph.D., 1923 (North Carolina).

‡Herman Glenn Baity, Sc.D., *Professor of Sanitary and Municipal Engineering and Dean of the School of Engineering.*
A.B., 1917, S.B. in C.E., 1922 (North Carolina); M.S., 1925, Sc.D., 1928 (Harvard).

James Penrose Harland, Ph.D., *Professor of Archæology.*
A.B., 1913, Ph.D., 1920 (Princeton).

Richard Junius Mendenhall Hobbs, A.B., LL.B., *Professor of Business Law.*
A.B., 1909 (Guilford); A.B., 1911 (Haverford); LL.B., 1914 (Columbia).

Karl Hartley Fussler, Ph.D., *Professor of Physics.*
A.B., 1909 (Indiana); Ph.D., 1916 (Pennsylvania).

George Raleigh Coffman, Ph.D., *Kenan Professor of English.*
A.B., 1903 (Drake); A.M., 1909 (Harvard); Ph.D., 1913 (Chicago).

James Talmadge Dobbins, Ph.D., *Professor of Chemistry.*
A.B., 1911, A.M., 1912, Ph.D., 1914 (North Carolina).

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† Absent on leave, fall, 1933.
‡ Absent on leave 1933-1934 on Federal Public Works Administration.

SAMUEL HUNTINGTON HOBBS, Ph.D., *Professor of Rural Social Economics.*
A.B., 1916, A.M., 1917 (North Carolina); Ph.D., 1929 (Wisconsin).

DANIEL ALLEN MACPHERSON, Ph.D., *Professor of Bacteriology.*
Ph.B., 1919, Sc.M., 1920 (Brown); Ph.D., 1929 (Chicago).

JOHN BROOKS WOOSLEY, Ph.D., *Professor of Economics.*
A.B., 1912 (Guilford); A.B., 1913, A.M., 1914 (Haverford); Ph.D., 1931 (Chicago).

NICHOLSON BARNEY ADAMS, Ph.D., *Professor of Spanish.*
A.B., 1915 (Washington and Lee); M.A., 1920, Ph.D., 1922 (Columbia).

LOREN CAREY MACKINNEY, Ph.D., *Professor of Medieval History.*
A.B., 1913 (Lawrence); A.M., 1916 (Wisconsin); Ph.D., 1925 (Chicago).

GEORGE HOWARD, Ph.D., *Professor of Education in Extension Teaching.*
A.B., 1912 (Davidson); A.M., 1922, Ph.D., 1924 (Columbia).

HENRY MATTHEW BURLAGE, Ph.D., *Professor of Pharmacy.*
A.B., 1919 (Indiana); A.M., 1921 (Harvard); Ph.G., B.S., in Pharm., 1924 (Purdue); Ph.D., 1927 (Washington).

WILLIAM JASPER MILLER, E.E., S.M.E.E., *Professor of Electrical Engineering and †Acting-Dean of the School of Engineering.*
E.E., 1915 (Texas); S.M.E.E., 1922 (Mass. Institute of Technology).

WALTER CLINTON JACKSON, B.S., LL.D., *Professor of Public Administration and Dean of the School of Public Administration.*
B.S., 1900, LL.D., 1926 (Mercer).

HOWARD RUSSELL HUSE, Ph.D., *Professor of Romance Languages.*
Ph.B., 1913, Ph.D., 1930 (Chicago).

CORYDON PERRY SPRUILL, JR., A.B., B.Litt., (Oxon.), *Professor of Economics.*
A.B., 1920 (North Carolina); B.Litt., 1922 (Oxford).

EDWARD TANKARD BROWNE, Ph.D., *Professor of Mathematics.*
A.B., 1915, A.M., 1917 (Virginia); Ph.D., 1926 (Chicago).

GUSTAV THEODOR SCHWENNING, Ph.D., *Professor of Business Administration.*
B.H., 1920 (Springfield); M.A., 1921, Ph.D., 1925 (Clark).

GREGORY LANSING PAINE, Ph.D., *Professor of English.*
Ph.B., 1914, A.M., 1920, Ph.D., 1924 (Chicago).

JOHN NATHANIEL COUCH, Ph.D., *Professor of Botany.*
A.B., 1919, A.M., 1922, Ph.D., 1924 (North Carolina).

SUSAN GREY AKERS, Ph.D., *Professor of Library Science and Acting-Director of the School of Library Science.*
A.B., 1909 (Kentucky); Ph.D., 1932 (Chicago).

† During absence of Dean Baity.

Thomas Jackson Woofter, Jr., *Research Professor in the Institute for Research in Social Science.*
A.B., 1912 (Georgia); Ph.D., 1920 (Columbia).

*Clarence Heer, Ph.D., *Research Professor of Economics.*
A.B., 1914 (Rochester); Ph.D., 1926 (Columbia).

Robert Baker Lawson, M.D., *Associate Professor of Applied Anatomy and Director of the Gymnasium.*
Student, 1897-1900 (North Carolina); M.D., 1902 (Maryland).

Arthur Simeon Winsor, Ph.D., *Associate Professor of Mathematics.*
A.B., 1914, A.M., 1915 (Mount Allison); Ph.D., 1927 (Johns Hopkins).

Floyd Harris Edmister, Ph.D., *Associate Professor of Chemistry.*
B.S., 1912 (Syracuse); M.S., 1913 (Louisiana State); Ph.D., 1918 (Syracuse).

Malcolm Dean Taylor, A.B., M.B.A., *Associate Professor of Marketing.*
A.B., 1920 (Oberlin); M.B.A., 1923 (Harvard).

Ernest Lloyd Mackie, Ph.D., *Associate Professor of Mathematics.*
A.B., 1917 (North Carolina); A.M., 1920 (Harvard); Ph.D., 1927 (Chicago).

Ernst Christian Paul Metzenthin, Ph.D., *Associate Professor of German.*
A.M., 1913 (Pennsylvania State); Ph.D., 1915 (Pennsylvania).

Wiley Britton Sanders, Ph.D., *Associate Professor of Public Administration.*
A.B., 1919 (Emory College); A.M., 1920 (Emory University); A.M., 1921 (North Carolina); Ph.D., 1929 (Chicago).

Shipp Gillespie Sanders, A.M., *Associate Professor of Latin.*
A.B., 1909 (Southwestern); A.M., 1915 (Princeton).

Joe Burton Linker, Ph.D., *Associate Professor of Mathematics.*
A.B., 1918, A.M., 1920 (North Carolina); Ph.D., 1924 (Johns Hopkins).

Joseph Merritt Lear, M.A., *Associate Professor of Insurance.*
A.B., 1900, A.M., 1902 (Randolph-Macon); M.A., 1915 (Columbia).

Carleton Estey Preston, Ph.D., *Associate Professor of the Teaching of Science.*
A.B., 1899, A.M., 1900, Ph.D., 1902 (Harvard).

Earle Keith Plyler, Ph.D., *Associate Professor of Physics.*
B.A., 1917, M.A., 1918 (Furman); M.A., 1923 (Johns Hopkins); Ph.D., 1924 (Cornell).

Preston Cooke Farrar, M.A., *Associate Professor of the Teaching of English.*
A.B., 1891 (Washington and Jefferson); M.A., 1904 (Columbia).

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* Absent on leave, 1933-1934.

HUGO GIDUZ, A.B., *Associate Professor of the Teaching of French.*
A.B., 1905 (Harvard).

HERMAN HENRY STAAB, M.A., *Associate Professor of Romance Languages.*
B.A., M.A., 1912 (University of the South).

ALMONTE CHARLES HOWELL, Ph.D., *Associate Professor of English.*
A.B., 1917 (Denison); M.A., 1920 (Columbia); Ph.D., 1924 (North Carolina).

WILLIAM DOUGALD MACMILLAN III, Ph.D., *Associate Professor of English.*
A.B., 1918, A.M., 1920, Ph.D., 1925 (North Carolina).

MILTON SYDNEY HEATH, A.M., *Associate Professor of Economics.*
A.B., 1920 (Kansas); A.M., 1924 (Harvard).

HOWARD FREDERICK MUNCH, A.M., *Associate Professor of the Teaching of Mathematics.*
B.S., 1904 (Adrian College); A.M., 1926 (Chicago).

FREDERICK BAYS MCCALL, A.B., LL.B., *Associate Professor of Law.*
A.B., 1915 (North Carolina); LL.B., 1928 (Yale).

ROY WILLIAM MORRISON, Ph.D., *Associate Professor of Education in Extension Teaching.*
A.B., 1916 (Davidson); Ph.D., 1928 (North Carolina).

HARRY DEMERLE WOLF, Ph.D., *Associate Professor of Economics.*
B.S., 1922 (Kansas State Teachers College); A.M., 1923, Ph.D., 1926 (Chicago).

GEORGE WALLACE SMITH, M.S.E., *Associate Professor of Engineering.*
S.B. in E.E., 1916 (North Carolina); M.S.E. in C.E., 1932 (Michigan).

RALPH MCCOY TRIMBLE, C.E., S.M., *Associate Professor of Civil Engineering.*
C.E., 1921 (Virginia); S.M., 1927 (North Carolina).

CHARLES DALE BEERS, Ph.D., *Associate Professor of Zoölogy.*
A.B., 1921, A.M., 1922 (North Carolina); Ph.D., 1925 (Johns Hopkins).

‡PAUL ELLIOTT GREEN, A.B., *Associate Professor of Philosophy.*
A.B., 1921 (North Carolina).

KEENER CHAPMAN FRAZER, A.M., *Associate Professor of Government.*
A.B., 1920 (Wofford); A.M., 1921 (North Carolina).

HORACE DOWNS CROCKFORD, Ph.D., *Associate Professor of Chemistry.*
B.S., 1920 (N. C. State College of Agriculture and Engineering); S.M., 1923, Ph.D., 1926 (North Carolina).

JOHN CORIDEN LYONS, Ph.D., *Associate Professor of French.*
B.S., 1920, M.A., 1921 (William and Mary); Ph.D., 1927 (North Carolina).

‡ Absent on leave, 1933-1934.

Thomas Smith McCorkle, B.Mus., *Associate Professor of Music.*
B.Mus., 1920 (Texas W. C. Conservatory).

Neil Phillips Bailey, M.S., *Associate Professor of Mechanical Engineering.*
B.S., in M.E., 1924 (Colorado); M.S. in M.E., 1927 (Idaho).

Alfred McLaren White, Sc.D., *Associate Professor of Chemical Engineering.*
B.S.E., 1925 (Michigan); M.S., 1926 (California); Sc.D., 1928 (Michigan).

Arthur Palmer Hudson, Ph.D., *Associate Professor of English.*
B.S., 1913, M.A., 1920 (Mississippi); M.A., 1925 (Chicago); Ph.D., 1930 (North Carolina).

Eston Everett Ericson, Ph.D., *Associate Professor of English.*
B.A., 1923 (Montana); M.A., 1925 (Maryland); Ph.D., 1928 (Johns Hopkins).

Robert Bingham Downs, M.S., *Associate Professor of Library Science and Librarian.*
A.B., 1926 (North Carolina); B.S., 1927, M.S., 1929 (Columbia University School of Library Service).

Frank Williams Hanft, A.B., S.J.D., *Associate Professor of Law.*
LL.B., 1924, A.B., 1929, LL.M., 1929 (Minnesota); S.J.D., 1931 (Harvard).

Evans William McChesney, Ph.D., *Associate Professor of Biological Chemistry.*
S.B., 1926, M.S., 1928 (Chicago); Ph.D., 1931 (Northwestern).

Ira Winfield Rose, Ph.G., *Associate Professor of Practical Pharmacy.*
Ph.G., 1906 (North Carolina).

John Gray Douglas, Ph.D., *Associate Professor of Geology.*
A.B., 1921, Ph.D., 1928 (Johns Hopkins).

Charles Phillips Russell, A.B., *Associate Professor of English.*
A.B., 1904 (North Carolina).

Gerald Raleigh MacCarthy, Ph.D., *Associate Professor of Geology.*
A.B., 1921 (Cornell); A.M., 1924, Ph.D., 1926 (North Carolina).

Paul Woodford Wager, Ph.D., *Associate Professor of Rural Social Economics.*
B.S., 1917 (Hobart College); A.M., 1920 (Haverford); Ph.D., 1927 (North Carolina).

Marion Lee Jacobs, Ph.G., M.Sc., *Associate Professor of Pharmaceutical Chemistry.*
Ph.G., 1920 (North Carolina); M.Sc., 1926 (Nebraska).

Stephen Albert Emery, Ph.D., *Associate Professor of Philosophy.*
A.B., 1923, Ph.D., 1928 (Cornell).

WIRTH FITCH FERGER, Ph.D., *Associate Professor of Economics.*
B.A., 1919, M.A., 1926, Ph.D., 1931 (Wisconsin); M.A., 1920 (Columbia).

RALPH STEELE BOGGS, Ph.D., *Associate Professor of Spanish.*
Ph.B., 1926, Ph.D., 1930 (Chicago).

ROY MELTON BROWN, Ph.D., *Associate Professor of Public Administration.*
A.B., 1906, A.M., 1921, Ph.D., 1929 (North Carolina).

GRANT LESTER DONNELLY, A.B. in Educ., M.D., *Associate Professor of Pharmacology.*
A.B. in Educ., 1929 (North Carolina); M.D., 1933 (Duke).

GUY BENTON JOHNSON, Ph.D., *Research Associate in the Institute for Research in Social Science.*
A.B., 1921 (Baylor University); A.M., 1922 (Chicago); Ph.D., 1927 (North Carolina).

RUPERT BAYLES VANCE, Ph.D., *Research Associate in the Institute for Research in Social Science.*
A.B., 1920 (Henderson-Brown); A.M., 1921 (Vanderbilt); Ph.D., 1928 (North Carolina).

HARRIET LAURA HERRING, A.M., *Research Associate in the Institute for Research in Social Science.*
A.B., 1913 (Meredith); A.M., 1918 (Radcliffe).

KATHARINE JOCHER, Ph.D., *Research Associate and Assistant Director of the Institute for Research in Social Science.*
A.B., 1922 (Goucher); A.M., 1923 (Pennsylvania); Ph.D., 1929 (North Carolina).

GUION GRIFFIS JOHNSON, Ph.D., *Research Associate in the Institute for Research in Social Science.*
A.B., 1921 (Baylor College); B.J., 1923 (Missouri); Ph.D., 1927 (North Carolina).

GAIL PHILLIPS EDWARDS, Ph.D., *Acting-Associate Professor of Sanitary Engineering.*
B.S., 1918, M.S., 1921, Ph.D., 1923 (Illinois); M.S. in Engineering, 1933 (Harvard).

GEORGE KENNETH GRANT HENRY, Ph.D., *Assistant Registrar.*
A.B., 1900, A.M., 1904 (Hamilton College); Ph.D., 1914 (North Carolina).

MICHAEL ARENDELL HILL, JR., A.M., *Assistant Professor of Mathematics.*
A.B., 1920, A.M., 1921 (North Carolina).

†JOHN MINOR GWYNN, A.M., *Assistant Professor of the Teaching of Latin.*
A.B., 1918, A.M., 1927 (North Carolina).

†ARNOLD KIMSEY KING, A.B. in Educ., A.M., *Assistant Professor of the Teaching of History.*
A.B. in Educ., 1925 (North Carolina); A.M., 1927 (Chicago).

† Absent on leave, 1933-1934.

Sallie Belle Marks, M.A., *Assistant Professor of Elementary Education.*
A.B., 1923 (S. W. Teachers College); M.A., 1926 (Columbia).

Roland Prince McClamroch, Ph.D., *Assistant Professor of English.*
A.B., 1920, A.M., 1922, Ph.D., 1927 (North Carolina).

Ralph Walton Bost, Ph.D., *Assistant Professor of Chemistry.*
A.B., 1923 (Newberry); A.M., 1924, Ph.D., 1928 (North Carolina).

James Gilbert Evans, M.A., *Assistant Professor of Economics.*
A.B., 1921 (Simpson); M.A., 1924 (Illinois).

Raymond William Adams, Ph.D., *Assistant Professor of English.*
A.B., 1920 (Beloit); A.M., 1921, Ph.D., 1928 (North Carolina).

William Anderson Olsen, A.M., *Assistant Professor of English.*
A.B., 1923 (Cornell); A.M., 1928 (North Carolina).

Nelson Otis Kennedy, Mus.B., *Assistant Professor of Music.*
Mus.B., 1923 (Knox College Conservatory); Mus.B., 1926 (American Conservatory).

Lee Marshall Brooks, Ph.D., *Assistant Professor of Sociology.*
A.B., 1925 (Boston); A.M., 1926, Ph.D., 1929 (North Carolina).

Richmond Pugh Bond, Ph.D., *Assistant Professor of English.*
A.B., 1920 (Vanderbilt); A.M., 1923, Ph.D., 1929 (Harvard).

Grace Penn Woodman, *Assistant Professor of Music Education in Extension Teaching.*

Robert Howard Sherrill, M.A., C.P.A., *Assistant Professor of Accounting.*
S.B.Comm., 1925 (North Carolina); M.A., 1927 (Columbia); C.P.A., State of North Carolina.

Sterling Aubrey Stoudemire, Ph.D., *Assistant Professor of Spanish.*
A.B., 1923, A.M., 1924, Ph.D., 1930 (North Carolina).

Samuel Selden, A.B., *Assistant Professor of English and Associate Director of the Carolina Playmakers.*
A.B., 1922 (Yale).

Charles Christopher Crittenden, Ph.D., *Assistant Professor of History.*
A.B., 1921, A.M., 1922 (Wake Forest); Ph.D., 1930 (Yale).

William Sumner Jenkins, LL.B., Ph.D., *Assistant Professor of Government.*
A.B., 1924, A.M., 1925, Ph.D., 1927, LL.B., 1931 (North Carolina).

Vinton Asbury Hoyle, Ph.D., *Assistant Professor of Mathematics.*
A.B., 1924, A.M., 1925 (North Carolina); Ph.D., 1930 (Princeton).

Ben Husbands, A.B., *Assistant Registrar.*
A.B., 1927 (North Carolina).

Gladys Angel Beard, M.A., *Assistant Professor of Health and Physical Education in Extension Teaching and Director of Physical Education for Women.*
B.S., 1923, M.A., 1930 (Teachers' College, Columbia).

LOFTON LEROY GARNER, A.M., *Assistant Professor of Mathematics.*
A.B., 1925, A.M., 1927 (North Carolina).

CHARLES BASKERVILLE ROBSON, Ph.D., *Assistant Professor of History.*
A.B., 1919 (Davidson); A.M., 1924 (Princeton); Ph.D., 1930 (North Carolina).

WILLIAM LEON WILEY, Ph.D., *Assistant Professor of French.*
A.B., 1921 (Chattanooga); A.M., 1925, Ph.D., 1930 (Harvard).

NORA BEUST, A.M., *Assistant Professor of Library Administration.*
B.A., 1922 (Wisconsin); A.M., 1930 (North Carolina).

JAMES HARMON CHADBOURNE, A.B., J.D., *Assistant Professor of Law.*
A.B., 1926 (The Citadel); J.D., 1931 (North Carolina).

ROBERT BOIES SHARPE, Ph.D., *Assistant Professor of English.*
B.A., 1918 (Wesleyan); M.A., 1923 (Wisconsin); Ph.D., 1928 (Yale).

LUCILE KELLING, B.L.S., *Assistant Professor of Library Science.*
A.B., 1917 (Whitman); B.L.S., 1921 (New York State Library School).

SAMUEL THOMAS EMORY, A.M., *Assistant Professor of Geology.*
A.B., 1921 (Randolph-Macon); A.M., 1931 (Columbia).

HERSHAL LUTHER MACON, M.A., *Acting-Assistant Professor of Economics.*
A.B., 1924 (Guilford); M.A., 1925 (Haverford).

*LUTHER APPEL PFLUEGER, Ph.D., *Acting-Assistant Professor of German.*
B.A., 1906 (Muhlenberg); M.A., 1913 (Indiana); Ph.D., 1923 (Wisconsin).

GEORGE HAROLD LAWRENCE, A.M., *Supervisor of Field Social Work.*
A.B., 1919 (Columbia); A.M., 1928 (North Carolina).

JOHN LEROY SMITH, A.M., *Instructor in French.*
A.B., 1917, A.M., 1924 (North Carolina).

THOMAS EWELL WRIGHT, A.M., *Instructor in French.*
A.B., 1922, A.M., 1926 (North Carolina).

JAMES OSLER BAILEY, A.M., *Instructor in English.*
A.B., 1924, A.M., 1927 (North Carolina).

ROBERT WHITE LINKER, Ph.D., *Instructor in French.*
A.B., 1925, A.M., 1928, Ph.D., 1933 (North Carolina)

WILLIAM LESTER WILSON, A.M., *Instructor in English.*
A.B., 1921 (Piedmont); A.M., 1928 (North Carolina).

JOHN ERWIN CARROLL, JR., A.M., *Instructor in Romance Languages.*
B.S., 1923 (The Citadel); A.M., 1928 (North Carolina).

ARTHUR RUSSELL HOLLETT, S.M.E., *Instructor in Engineering.*
S.B. in Civ. Eng'g., 1928, S.M.E., 1933 (North Carolina).

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* Temporary appointment for the winter and spring quarters, 1934.

Raymond Franklin Stainback, S.M.E., *Instructor in Electrical Engineering.*
S.B. in Elec. Eng'g., 1926, S.M.E., 1931 (North Carolina).

Rex Shelton Winslow, A.M., *Instructor in Economics.*
A.B., 1923 (Simpson); A.M., 1929 (Illinois)

Edward Alexander Cameron, A.M., *Instructor in Mathematics.*
A.B. in Educ., 1928, A.M., 1929 (North Carolina).

Harry Kitsun Russell, Ph.D., *Instructor in English.*
A.B., 1923 (Davidson); A.M., 1928, Ph.D., 1931 (North Carolina).

Edwin Weems Winkler, B.S. in E.E., *Instructor in Engineering.*
B.S. in E.E., 1928 (Montana State).

William Milton McLeod, Ph.D., *Instructor in French.*
A.B., 1921 (Wofford); A.M., 1930, Ph.D., 1933 (North Carolina).

Irving Lee Martin, S.M., *Instructor in Geography and Geology.*
S.B. in Geology, 1927, S.M., 1928 (North Carolina).

VanCourtlandt Elliott, Ph.D., *Instructor in Latin.*
A.B., 1928 (Bowdoin); A.M., 1929, Ph.D., 1932 (North Carolina).

Carl Hamilton Pegg, Ph.D., *Instructor in History.*
A.B., 1927, A.M., 1927, Ph.D., 1929 (North Carolina).

John Dargan Watson, S.M.E., *Instructor in Civil Engineering.*
A.B., 1925 (Furman); S.B. in C.E., 1928, S.M. in C.E., 1932 (North Carolina).

Thomas Pasteur Noe, Jr., S.M.E., *Instructor in Civil Engineering.*
A.B., 1926 (Univ. of the South); S.B. in C.E., 1928, S.M. in Civ. Eng'g., 1930 (North Carolina).

Cecil Johnson, Ph.D., *Instructor in History.*
A.B., 1922 (Mississippi College); M.A., 1924 (Virginia); Ph.D., 1932 (Yale).

Harry Ellerbe Davis, A.B., *Instructor in English and Assistant Director of the Carolina Playmakers.*
A.B., 1927 (South Carolina).

Colin Carmichael, B.Sc., *Instructor in Mechanical Engineering.*
B.Sc., 1926 (Glasgow).

Josiah Cox Russell, Ph.D., *Instructor in History.*
A.B., 1922 (Earlham); A.M., 1923, Ph.D., 1926 (Harvard).

Thomas Henderson Byrnes, B.S., M.D., *Instructor in Pathology.*
B.S., 1922 (Clemson); M.D., 1926 (Medical College of South Carolina).

Wilburn Philip Smith, M.A., *Instructor in Spanish.*
A.B., 1920 (Georgia); M.A., 1923 (Emory).

Hiram Harvie Britt, M.A., *Instructor in History.*
B.Ph., 1928, M.A., 1930 (Emory).

Cecil Grady Taylor, A.M., *Instructor in French.*
A.B. in Ed., 1929, A.M., 1930 (North Carolina)

EDWARD HUTCHINGS ANDERSON, M.S., *Instructor in Economics.*
B.S., 1923 (Virginia); M.S., 1928 (Florida).

ARCHIBALD KENNETH SHIELDS, Ph.D., *Instructor in Spanish.*
A.B., 1927 (Millsaps); M.A., 1930, Ph.D., 1933 (North Carolina).

MENO HANS SPANN, Ph.D., *Instructor in German.*
Ph.D., 1928 (Marburg).

GEORGE FREDERICK HORNER, M.A., *Instructor in English.*
B.A., 1921, M.A., 1924 (Pennsylvania State College).

GEORGE FRANK SENSABAUGH, A.M., *Instructor in English.*
B.A., 1928 (Vanderbilt); A.M., 1930 (North Carolina).

ROBERT LEE GARRETT, A.M., *Instructor in Mathematics.*
B.S., 1926 (Georgia); A.M., 1930 (North Carolina).

CLAUDE JACKSON CRAVEN, A.M., *Instructor in Physics.*
A.B. in Educ., 1931, A.M., 1933 (North Carolina).

FRED HOBSON ARNOLD, M.A., *Instructor in Economics.*
B.S., 1925, M.A., 1928 (Peabody).

FREDERICK EDWARD COENEN, A.M., *Instructor in German.*
A.B., 1928, A.M., 1930 (Arizona); Student, University of Cologne, 1931-1932.

MILTON HOWARD WILLIAMS, M.A., *Instructor in Philosophy.*
A.B., 1931 (Wesleyan); A.M., 1932 (North Carolina).

CHARLES EDWARD FELTNER, B.S. in C.E., *Instructor in Engineering.*
B.S. in C.E., 1928 (Va. Polyt. Inst.).

FRANCIS CLEMENT HAYES, M.A., *Instructor in Spanish.*
A.B., 1928 (North Carolina); M.A., 1930 (Columbia).

HERMAN EVERETTE SPIVEY, A.M., *Instructor in English.*
A.B., 1928, A.M., 1929 (North Carolina).

EARL ANDERSON SLOCUM, B.Mus., *Instructor in Music.*
B.Mus., 1931 (Michigan).

HENRY GRADY MILLER, *Instructor in Music.*

DAVID KIRBY SPELT, A.B., *Instructor in Psychology.*
A.B., 1930 (Haverford).

DONALD DELOS WICKENS, A.M., *Instructor in Psychology.*
A.B., 1931 (Centre); A.M., 1933 (North Carolina).

SAMUEL WILLIAMS JOHN WELCH, S.B., *Instructor in Psychology.*
S.B., 1926 (M.I. T.).

BEVERLY REID THURMAN, JR., A.M., *Instructor in French.*
A.B., 1931 (William and Mary); A.M., 1933 (North Carolina).

R. R. HOLLINGSWORTH, Ph.D., *Instructor in the Teaching of History.*
A.B., 1915 (Washington); M.A., 1921 (Columbia); Ph.D., 1931 (North Carolina).

RESEARCH ASSISTANTS, 1933-1934

Alma Holland, A.B., *Research Assistant in Botany.*

Walter Monroe Summerville, *Research Assistant in Pharmacology.*

Robert Howard Schnell, *Research Assistant in Law.*

Cecile Louise Piltz, *Research Assistant in Law.*

Irvin Elsworth Erb, *Research Assistant in Law.*

Lucile Marshall Elliott, *Research Assistant in Law.*

Columbus Andrews, A.M., *Research Assistant in the Institute for Research in Social Science.*

Julia Cherry Spruill, A.M., *Research Assistant in the Institute for Research in Social Science.*

Waller Wynne, Jr., A.M., *Research Assistant in the Institute for Research in Social Science.*

Edwin Marvin Perkins, J.D., *Research Assistant in the Institute for Research in Social Science.*

Robin Hood, A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

Gordon Williams Blackwell, A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

Harry Mortimer Douty, A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

McDonald Kelso Horne, Jr., A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

Benjamin Burks Kendrick, Jr., A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

Edith Webb Williams, A.M., *Junior Research Assistant in the Institute for Research in Social Science.*

TEACHING FELLOWS, 1933-1934

Budd Elmon Smith, A.B. in Educ.	Botany
Granvil Charles Kyker, B.S.	Chemistry
Ernest William Constable, S.M.	Chemistry
James Otho Turner, A.M.	Chemistry
Albert Irving Suskin, A.M.	Classics
Clement Harold Donovan, B.S.	Economics and Commerce
Lyles Glenn McNairy, A.M.	Economics and Commerce
Elwood Cartelyou Hunter, A.M.	Education
James Robert Marvin, S.B. in E.E.	Engineering
Andrew John Mahler, M.A.	English
Arnold Ledgerwood Williams, A.M.	English

MONROE JOHNSON HAGOOD, A.M.	English
JAMES ATWELL ALEXANDER, A.M.	Geology
*JOHN WYATT ARMFIELD, A.B.	German
†NEWTON DEUEL HOLBROOK III, M.A.	German
JOSEPH CARLYLE SITTERSON, A.M.	History and Government
EUGENE EDWIN PFAFF, A.B.	History and Government
JAMES MILLER GRIMES, JR., A.M.	History and Government
HOWARD MOVESS NAHIKIAN, A.B.	Mathematics
THOMAS RICHARDSON PALMERLEE, A.M.	Mathematics
MYRON STANLEY MCCAY, B.A.	Physics
HARRY VOORHIES BICE, B.A.	Psychology
WALTER DEVEREAUX CREECH, A.M.	Romance Languages
DAVID ETHAN FRIERSON, M.A.	Romance Languages
WILLIAM ROWE WEAVER, A.B.	Romance Languages
STANLEY SCOTT STEVENS, A.M.	Sociology
JAMES WORKMAN CULBERTSON, B.S.	Zoölogy

STUDENT ASSISTANTS, 1933-1934

ROY WADE FRANKLIN	Anatomy
JUNE V. GUNTER, A.B.	Anatomy
ERNEST VICK DEANS, JR.	Botany
WILLARD CHAPPELL HEWITT	Botany
JOHN ROBERT RAPER	Botany
ANDREW CLARK MATHEWS, A.M.	Botany
ALICE RUTH SCHOLZ, A.B.	Botany
ALLEN LEANDER ALEXANDER, S.M.	Chemistry
EDWARD BRENNER, S.B. in Ch.E.	Chemistry
ALFRED TURNER CLIFFORD, S.M.	Chemistry
JAMES KINNEY COLEHOUR, B.S.	Chemistry
HENRY ORELLO FARR, JR., M.S.	Chemistry
DAN FORE, JR., B.A.	Chemistry
JOSEPH NISBET LECONTE, M.S.	Chemistry
JAMES CARR LOFTIN, S.M.	Chemistry
JAMES FRANK NICHOLSON, B.S.	Chemistry
ELMER CROMWELL POWELL, JR., S.B.	Chemistry
LAURA CORBETT THOMAS, S.M.	Chemistry
WILLIAM WALDO WILLIAMS, S.M.	Chemistry
GEORGE HAMILTON HOLMES, JR., A.B.	Commerce
ROBERT WARREN BARNETT, A.B.	Economics
JAMES HOUSTON BARNES	Economics
ANDREW OTHO CURL, JR.	Economics
WILBUR DODSON LOWDER	Economics
MARSHALL CORNETT BELL, A.B. in Educ.	Education
ELIZABETH WOOD DAVIS, A.B.	Education
DALMA ADOLPH BROWN, A.M.	English

* Resigned, October 1, 1933.
† Appointed, January 3, 1934.

Guy Adams Cardwell, M.A.....English
Ernest Haynes Cox, M.A.....English
Edwin Shepard Miller, A.M.....English
Maurice Augustus Moore, Jr., A.M.....English
Mitchell Preston Wells, A.M.....English
Erik Norman Kjellesvig.....Geology
George Wallace Chandler, Jr.....Gymnasium
John Lawrence Hodges.....Gymnasium
Thomas Shepherd Jenrette.....Gymnasium
Charles Linwood Neal.....Pharmacy
Claude Phillip Suttlemyre.....Pharmacy
Robert Rodney Wells.....Pharmacy
Roland Scott Whitely.....Pharmacy
Ernest Scott Barr, A.M.....Physics
William Lamont Smith, A.B.....Physics
Edith Wladowsky, B.S.....Psychology
Sybille Kahn Berwanger, A.B.....Public Administration
Hyman Hertzel Addlestone, B.S.....Zoölogy
Mildred Irene Boliek, A.M.....Zoölogy
Merl John Carson.....Zoölogy
Eugene Pleasants Odum.....Zoölogy

FACULTY COMMITTEES

The President and the Executive Secretary are members *ex officio* of all committees.

Advisory (*elected with terms expiring the year indicated*). 1934: Professors Bell, Van Hecke, Dey; 1935: Professors MacNider, Harrer, Knight; 1936: Professors Carroll, Connor, Howe.

Executive (*elected with terms expiring the year indicated*). 1934: Professors Murchison (Chairman), Bagby; 1935: Professors Spruill, Wettach; 1936: Professors Fussler, Totten.

Athletics. Professors A. W. Hobbs, Chairman, Baity, Connor.

Chapel. Professors Bradshaw, Chairman, Bernard, Carroll, House, Mangum, Meyer, Mr. Comer.

Coöperation with the Alumni. Professors Bernard, Bradshaw, Coates, Connor.

Debates. Professors Bernard, Coates, McKie, Williams.

Dramatics. Professors Koch, Chairman, Howe, McKie, Wheeler.

English Composition. Professors Totten, Chairman, R. W. Adams, Secretary, N. B. Adams, Bagby, Bell, Coffin, Coffman, Farrar, Ferger, Fussler, MacCarthy, W. B. Sanders, Thrall, H. V. Wilson.

Entrance Requirements. Professors Walker, Chairman, Caldwell, Carroll, R. E. Coker, Harrer, T. J. Wilson.

Fine Arts. Professors Howe, Chairman, Bernard, Booker, Harland, Holmes, Koch.

FOREIGN STUDY. Professors Dey, Chairman, Bell, Harrer, Leavitt, Pierson, Mr. Grumman.

FRATERNITIES. Professors Dey, Chairman, Bernard, Bradshaw, Carroll, Lyons, Peacock, T. J. Wilson.

GROUNDS AND BUILDINGS. Professors W. C. Coker, Chairman, Booker, MacNider, Odum, Wheeler, Mr. Woollen.

HEALTH AND SANITATION. Doctor Berryhill, Chairman, Professor Bullitt, Mr. Woollen.

INFIRMARY. Doctors Manning, Chairman, Mangum, MacNider.

LIBRARY BOOK COMMITTEE. Professors Downs, Chairman, Bernard, Dey, Henderson, MacKinney, MacMillan, Murchison, H. V. Wilson.

LIBRARY BUDGET. Professors Downs, Chairman, Baity, Beard, Bell, Carroll, A. W. Hobbs, Jackson, Mangum, Pierson, VanHecke.

SPECIAL COMMITTEE ON BIBLIOGRAPHICAL AIDS. Professors Downs, Chairman, Coffman, W. C. Coker, Harrer, Knight, MacNider, Pierson, Vance, VanHecke, Zimmerman.

MCNAIR LECTURES. Professors Williams, Chairman, Bell, Harrer, Henderson, MacNider.

MUSICAL AND DRAMATIC ACTIVITIES. Professors A. W. Hobbs, Chairman, Howe, Koch.

PUBLIC LECTURES. Professors A. W. Hobbs, Chairman, W. C. Coker, Henderson, MacNider.

PUBLIC OCCASIONS AND CELEBRATIONS. Professors Connor, Hamilton, Henderson, Howe, Mangum, Wheeler, Mr. Woollen.

REGULATION OF STUDENT DANCES. Professors Bernard, Chairman, R. E. Coker, Dey.

STUDENT LIFE AND ACTIVITIES. Professors Bradshaw, Chairman, Bernard, Booker, Caldwell, Meyer.

STUDENT MORTALITY. Professors Trabue, Chairman, Bradshaw, Dashiell, Jordan, Lasley, T. J. Wilson.

SURVEY OF COURSES. Professors Carroll, Chairman, Knight, Secretary, Baity, Beard, Bell, A. W. Hobbs, Jackson, Mangum, Pierson, VanHecke, T. J. Wilson.

TRAVEL STUDY IN AMERICA. Professors Bell, Chairman, Murchison, Prouty.

WEIL LECTURES. Professors Carroll, Chairman, Connor, Murchison, Odum.

PART TWO—GENERAL INFORMATION

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THE UNIVERSITY

FOUNDATION AND GOVERNMENT

The University was established in obedience to the first Constitution of the State, which was adopted in December, 1776. A clause of section XLI declared that "all useful learning shall be duly encouraged and promoted in one or more universities." The charter was granted by the General Assembly in 1789, the cornerstone of the Old East Building was laid in 1793, and the university was opened in January, 1795.

By the Constitution adopted in 1868 the General Assembly has "power to provide for the election of Trustees of the University of North Carolina, in whom, when chosen, shall be vested all the privileges, rights, franchises and endowments thereof in anywise granted to or conferred upon the trustees of said University; and the General Assembly may make such provisions, laws and regulations, from time to time, as may be necessary and expedient for the maintenance and management of said University." The Governor of the State is *ex officio* President of the Board of Trustees.

The same Constitution, in connection with "Benefits of the University," further states: The General Assembly shall provide that the benefits of the University, as far as practicable, be extended to the youth of the State free of expense for tuition; also, that all the

property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estates of deceased persons, shall be appropriated to the use of the University.

ORGANIZATION AND DEGREES

The University is organized into a College of Liberal Arts and nine Schools, which have jurisdiction over degrees as shown below. The College of Liberal Arts: Bachelor of Arts, Bachelor of Arts in Journalism, and Bachelor of Arts in Music, and jointly with the School of Law, Bachelor of Arts and Laws; the School of Applied Science: Bachelor of Science in Chemistry, in Geology, and jointly with the School of Medicine, in Medicine; the School of Commerce: Bachelor of Science in Commerce, and jointly with the School of Law, Bachelor of Science in Commerce and Laws; the School of Engineering: Bachelor of Science in Electrical Engineering, in Civil Engineering, in Chemical Engineering, and in Mechanical Engineering; the School of Public Administration: Bachelor of Science in Public Administration; the Graduate School: Master of Arts, Master of Science, and Doctor of Philosophy; the School of Law: Bachelor of Laws, Doctor of Law, Bachelor of Arts and Laws (jointly with the College of Liberal Arts), and jointly with the School of Commerce, Bachelor of Science in Commerce and Laws; the School of Medicine: Bachelor of Science in Medicine (jointly with the School of Applied Science); the School of Pharmacy: Bachelor of Science in Pharmacy; the School of Library Science: Bachelor of Arts in Library Science.

In the Summer Session are offered many courses for which regular University credit is allowed, including special courses (particularly in elementary education) designed primarily for the teachers of the State. Practically all the work offered is of collegiate grade and may be counted towards some degree from the University.

There is also a Division of Extension through which the services of the University Faculty and certain material equipment of the University are made available to the people of the State generally.

THE GENERAL FACULTY OF THE UNIVERSITY

By action of the Trustees of the University the General Faculty includes all members of the University's teaching force above the rank of Instructor and all general administrative officers of the institution. In the President and the General Faculty is vested final authority (under the Trustees) over all matters of University policy and activity. Under the General Faculty the College and the Schools have separate Faculties and Administrative Boards, which have final authority over matters pertaining solely to such College or Schools.

THE COLLEGE YEAR

The college year is divided into fall, winter, and spring quarters of approximately twelve weeks each, and a summer session divided into two terms of about six weeks each. There is a Thanksgiving recess of three days, a Christmas recess of approximately two weeks, and a spring recess of about six days.

RELIGIOUS INFLUENCES

Through the coöperation of all concerned, religious influences of usually effective character surround the University student. Chapel exercises are held in Memorial Hall every week-day morning, except Saturday, at ten-thirty o'clock. The Young Men's Christian Association, to which the University makes annual contributions, is of great value in the life of the campus.

The larger denominations of the State have erected at Chapel Hill modern and adequate church plants. The Chapel Hill churches are manned by an effective and coöperative group of pastors, are all located in close proximity to the campus, and play a very large and genuine part in the lift of the University.

DISCIPLINE

The University endeavors to make young men manly and self-reliant, and to develop character by educating the conscience. The Faculty may, at their discretion, admonish, suspend, or dismiss students for neglect of duty, or for misconduct.

PHYSICAL TRAINING

Hearty encouragement is given to athletic sports and to all kinds of physical culture.

In addition to inter-collegiate athletics the University fosters an unusually extensive program of intra-mural sports, involving over half the undergraduates in a wide variety of games. There are contests in basketball, tag-football, indoor and outdoor baseball, tennis, soccer, quoits, rifleshooting, boxing, wrestling, fencing, and track. Intra-mural teams offer every interested student opportunity for participation in some interesting and healthful form of competition with his fellows, for learning team work and good sportsmanship.

Exercise is required three hours a week of all Freshmen, unless excused. In the fall a thorough physical examination of each new student is made, and the heart, the lungs, the eyes, and the ears are tested, in order that students defective in physical development may be given special work under the personal supervision of the Director of the Gymnasium. Round shoulders, flat chests, curvature of the spinal column, hernia, and mild cases of congenital paralysis are thus often greatly benefited and sometimes completely corrected.

The physical education of women students is under the charge of Mrs. Gladys Angel Beard as Director and a group of administrative officers as a board. Each freshman woman student is carefully examined and tested for the purpose of discovering defects and correcting them. Arrangement for this examination is made when the student registers for the required course. Vigorous exercise and recreation are provided by tennis, archery, dancing, track work, basketball, and hockey; and inter-class competition is encouraged.

MEDICAL ATTENTION

In order to provide proper attention for the student during sickness the University employs a practising physician and maintains a well appointed infirmary. The infirmary is equipped with all necessary conveniences and comforts, is under the immediate supervision of the University Physician, and is provided with two experienced nurses. At the discretion of the University Physician a student may be admitted to its wards, and for such services as may be rendered by the staff no charges are made. But should any additional service (consultation, special nurses, operations requiring the attendance of a trained surgeon), recommended by the attending physician and approved by the parent or guardian, be necessary, the student will be required to pay for such services.

THE UNIVERSITY LIBRARY

Robert Bingham Downs, A.B., M.S., *Librarian.*
Cornelia Spencer Love, A.B., B.L.S., *Order Librarian.*
Georgia Hicks Faison, A.B., B.L.S., *Reference Librarian.*
Elizabeth Hardy Thompson, A.B., B.L.S., *Head Cataloguer.*
Mary Lindsay Thornton, *In charge of the North Carolina Collection.*
Alma Stone Skaggs, A.B., A.B. in L.S., *In charge of Periodicals and Bindings.*
William Porter Kellam, A.B., A.M., A.B. in L.S., *In charge of Circulation.*
Joseph Gregoire DeRoulhac Hamilton, Ph.D., *Director of the Southern Historical Collection.*
Nellie Roberson, A.B., *Chief of Extension Library Service.*

Olan Victor Cook, A.B., A.B. in L.S., *Librarian of the Documents Division.*
Guelda Hillyard Elliott, *Librarian of the Commerce Library.*
Lucile Marshall Elliott, A.B., *Librarian of the Law Library.*
Edith Eugenia Averitt, A.B., *Librarian of the Geology Library.*
Henrietta Rhea Smedes, *Custodian of the Rural Economics Library.*
Ruby Ross, *Custodian of the Engineering Library.*

The University Library contained on November 1, 1933, 262,720 volumes.

The Library funds are expended under the direction of the Librarian, the Library Budget Committee, the Library Book Committee, and Professors in charge of Departments, with special reference to the instruction given in the University. The annual addition of books from purchase, donations, and exchanges is approximately 15,000 volumes.

The main Library is housed in a new library building completed and occupied in July, 1929. Its seating capacity is one thousand readers; its present book capacity is approximately 300,000 volumes.

In addition to the resources of the general reference rooms, the Library has a collection of 46,018 bound periodicals.

Three thousand four hundred and forty-eight current periodicals, newspapers, transactions of literary, scientific, historical, and other societies, continuing and supplementing the bound sets, are subscribed for or secured through exchange annually.

The Library is a depository for the publications of the United States Government. It maintains a depository catalog of the printed cards issued by the Library of Congress.

Five seminar rooms on the third floor of the Library facilitate advanced work in English, German, Greek and Latin, the Romance Literatures, and History.

The North Carolina room contains all the books in the Library which relate to North Carolina, including the Weeks collection of Caroliniana. The whole makes one of the finest collections on the history of this State in the country and offers rare advantages to the research student. It is in charge of a special librarian.

The Hanes Foundation for the Study of the Origin and Development of the Book was established by the children of John Wesley and Anna Hodgin Hanes, April 5, 1929, as a memorial to their parents. This collection comprises rare and early printed books and manuscripts which are available to the faculty and students as illustrative materials.

Brief instruction in the use of the card catalogue, the periodical indexes, and the reference books generally, is given new students at the beginning of each year. Courses in Library Science are given for students who are preparing for positions in school, public, and college libraries.

DEPARTMENTAL LIBRARIES

Six departmental libraries are in charge of regular attendants: Commerce, Education, Engineering, Law, Geology, and Rural Economics. Five libraries: Botany, Chemistry, Medicine, Pharmacy, and Zoölogy are under the supervision of the instructors in those departments and the Librarian.

RULES

Subscribers to the Library are the students and members of the faculty.

Faculty members are not restricted as to the number of books borrowed or the time they may be retained except in the case of Fiction, "Special Collections," or books needed for Reserve. All books charged to Faculty members must be returned each June.

The term Faculty applies to men of or above the rank of Instructor.

Other persons who desire to use the Library may become subscribers on payment of a regular library fee of $4 a year, $1 for three months, or 50 cents a month.

Persons who are not subscribers may not borrow books on a subscriber's name.

Books bought for a Department do not consequently become the exclusive property of that Department. They are the property of the University, acquired through the Library, and are to be so placed as to insure their greatest use to the greatest number of students and faculty members.

A student who owes the Library for fines or lost books will not receive academic credit for his courses at the end of a quarter.

THE UNIVERSITY OF NORTH CAROLINA PRESS

Nathan Wilson Walker, *Chairman*
William Terry Couch, *Director*

BOARD OF GOVERNORS

William Chambers Coker	Nathan Wilson Walker
Robert Digges Wimberly Connor	Leslie Weil
Robert Burton House	Robert Hasley Wettach
Howard Washington Odum	Gustave Adolphus Harrer
George Coffin Taylor	Claudius Temple Murchison
Frank Porter Graham	Rupert Bayless Vance
Russell Marvin Grumman	Charles Walter Tillett, Jr.

The University of North Carolina Press was incorporated on June 12, 1922. The objects for which it was established are: (1) to publish periodicals devoted to the advancement of learning and produced at the University by or under the direction of the Faculty; (2) to publish catalogues, bulletins, and other documents pertaining to the University and its various schools and departments; and (3) to promote generally, by publishing deserving works, the advancement of arts and sciences and the development of literature.

The Press was established upon the authority of the Board of Trustees of the University, is a non-stock corporation, is financed in part by the University, and is managed by a Board of Governors drawn from the Faculty and Board of Trustees.

In addition to the publication of books, the Press has established three series of studies under the title: The University of North Carolina (1) "Studies in Language and Literature," (2) "Studies in Social Science and History," and (3) "Studies in Science." The Press also publishes the following periodicals: *The Journal of the Elisha Mitchell Scientific Society; Studies in Philology; The James Sprunt Historical Studies; The High School Journal; Social Forces; The North Carolina Law Review; The University of North Carolina Extension Bulletin; The University News Letter; The University of North Carolina Record.*

The Press office is located in Alumni Building. The agents of the Press for Great Britain and the British Dominions are respectively *The Oxford University Press,* London, for books and studies; *The Cambridge University Press,* London, for periodicals. A complete list of publications issued by the Press will be supplied to any address on request.

THE INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

Howard Washington Odum, Ph.D., *Director.*
Katherine Jocher, Ph.D., *Assistant Director.*

BOARD OF GOVERNORS

Frank Porter Graham
Dudley DeWitt Carroll
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Howard Washington Odum
Marion Rex Trabue
Maurice Taylor VanHecke

STAFF

Ernest Rutherford Groves, A.B., B.D., *Research Professor*
Thomas Jackson Woofter, Jr., Ph.D., *Research Professor*
Clarence Heer, Ph.D., *Research Professor*
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Guion Griffis Johnson, Ph.D., *Research Associate*
Rupert Bayless Vance, Ph.D., *Research Associate*
Columbus Andrews, A.M., *Research Assistant*
Julia Cherry Spruill, A.M., *Research Assistant*
Waller Wynne, Jr., A.M., *Research Assistant*
Edwin Marvin Perkins, J.D., *Research Assistant*
Robin Hood, A.M., *Junior Research Assistant*
Gordon Williams Blackwell, A.M., *Junior Research Assistant*
Henry Mortimer Douty, A.M., *Junior Research Assistant*
McDonald Kelso Horne, A.M., *Junior Research Assistant*
Benjamin Burks Kendrick, Jr., A.M., *Junior Research Assistant*
Edith Webb Williams, A.M., *Junior Research Assistant*

The increasing emphasis placed upon the social sciences within recent years and the need for scientific research in this field have given rise to a number of organizations for promoting research such as the Social Science Research Council and several of the national foundations which have set aside major portions of their funds for this purpose. In history, government, economics, sociology, jurisprudence, anthropology, statistics, social psychology, and other related fields there is need for new standards of research, for coöordination, and for correlation.

At the University of North Carolina there had been for some time special need for assistance if the many investigations in the social sciences, already under way or projected, were to be carried out. It was a fortunate circumstance, therefore, when the Institute for Research in Social Science was made possible in 1924 by a special grant from the Laura Spelman Rockefeller Memorial, and later from the Rockefeller Foundation and University appropriations. An extensive program of regional research, including studies in local government, southern historical backgrounds, socio-economic activities including studies in social-industrial relationships, crime and criminal justice, the Negro, folklore and folk backgrounds of the southern people, social institutions, public welfare and child welfare, human geography of the American South,—has been developed and got under way by means of concrete projects in the several fields. Accordingly, the scope of the program includes the social sciences, broadly construed, and the emphasis is upon projects and problems rather than upon discipline. Research projects, while chosen for the most part from the state and regional field, are selected with a view to their generic value and for their possible contribution in both method and content.

The permanent staff of the Institute is composed of research professors and associates, who, in addition to their own researches, direct other researches and may give courses in line with their special subjects. There are also a limited number of research assistants on yearly appointment. These research assistantships are open to men and women who have shown ability to do original research. A Master's degree or the equivalent in research experience constitutes the minimum requirement for appointment. All appointments are made on a twelve months' basis. The awards are in no sense fellowships, but each appointment is made with the definite purpose in mind of assisting specific research in the social sciences under the direction of professors and associates. Such assistantships carry with them stipends varying from $500 to $1,500.

Additional information and application blanks for appointment may be had by writing to the INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE, The University of North Carolina, Chapel Hill, North Carolina.

THE INSTITUTE OF FOLK MUSIC

Russell M. Grumman, *Chairman.*
Lamar Stringfield, *Director.*

EXECUTIVE COMMITTEE

Felix A. Grisette
Robert Burton House
Robert White Linker
T. Smith McCorkle

ADVISORY COUNCIL

Mayne Albright
Ralph S. Boggs
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Guy Benton Johnson
Thor Johnson
Frederick H. Koch
John Powell
Joseph Hyde Pratt
Phillips Russell
Josephine Sharkey

The South has long been known as the potential source of a wealth of folklore of all kinds. That native folk music is to be found in abundance in North Carolina is evidenced by the numerous surveys, compilations, and collections of manuscripts which has been made during the past.

Much of this effort has ended in an accumulation of material which, although serving to provide the connoisseur with data for a report, has brought to the people of the State no consciousness of their possessions in folk music, nor the desire to utilize original melodies for the music of the home, school, and church.

It thus became apparent that research in the field of folk music must be identified with an educational institution if an adequate program of education and propaganda were to be brought to the people.

The Institute of Folk Music was organized as a department of the University in September, 1931.

Although related to the departments of social science, anthropology, and music, as here established the Institute was affiliated with the department last named.

The Institute is voluntary in support. Contributions from individuals interested in its success have been augmented by a fund created through chamber music concerts given by Mr. Lamar Stringfield, composer-flutist, and assisting artists.

A state-wide program of education for the stimulation of amateur composition in music has been launched. In response to this cam-

paign, many manuscripts have been presented to the Institute for examination and critique.

Programs of American music have been given by Mr. Stringfield and assisting musicians in every section of the State. Encouragement has been lent to every effort to utilize local musical talent in the home, school, church, and social gathering.

The University Extension Division has published Mr. Stringfield's bulletin, "America and Her Music," which is being nationally used by music clubs as a guide for study and program making.

A festival of folk music, to which musicians from all parts of the State contribute, is an annual feature of the Institute's calendar. The Advisory Council of the Institute is composed of nationally-known leaders in fields of education, philanthropy, social science, dramatics, and journalism.

ADMISSION

ADMISSION TO THE UNIVERSITY

Evidence of successful vaccination against smallpox is a prerequisite for the admission of students to this institution. Applicants for the admission to any school are hereby informed that a certificate as to successful vaccination must be sent to the Dean of Admissions before they can be admitted.

Candidates for admission to the University are received by certificate from accredited schools or by examination.

Entrance by Certificate. Students who present certificates of work accomplished at preparatory schools and colleges may be admitted without examination, provided the certificates are approved. The right to examine, however, is reserved, when such a course is deemed necessary. Certificates must be made out on the printed forms furnished on application to the Dean of Admissions, and should be sent in as early as possible in the summer vacation. Notice is hereby given that satisfactory credentials must be in the hands of the Dean of Admissions before an applicant may register. Candidates must present themselves in person before the Committees on the Registration of Freshmen during the period of registration.

Entrance by Examination. The University will accept the certificates of the College Entrance Examination Board provided the applicants submit satisfactory school certificates also. State-wide entrance examinations are held, when asked for in advance, at the offices of the County Superintendents early in June and at the University on a set date preceding the opening of the fall quarter in September. These examinations are given to graduates of non-accredited high schools and to other approved applicants who have submitted evidence of having completed the equivalent of a four years' high school course, aggregating at least fifteen units from the subjects listed below. The Dean of Admissions in each instance must approve the applicant's record as meeting this requirement. Candidates for admission by examination must make application to the Dean of Admissions in writing two weeks before the date for registration. Time and place for examinations will be arranged.

Admission to Advanced Standing

A candidate may be admitted to advanced standing in accordance with the amount and character of his previous training. The Dean of Admissions will accept, with proper restrictions, an official transcript of work satisfactorily completed at a college or university of

good standing. All credits allowed by him stand in suspense until the candidate shall have spent one quarter in residence. If the work during this quarter is unsatisfactory, the credits may be cancelled.

A candidate for advanced standing must send to the Dean of Admissions his application accompanied by an official transcript of his previous record and statement of honorable dismissal at least two weeks before the date for registration. Blank forms may be secured by writing the above officer. Notice is hereby given that applicants whose records at other institutions do not reach the standard required for the readmission of students at this institution will not be admitted, and that satisfactory credentials must be in the hands of the above officer before an applicant may register.

In case of students who enter as candidates for a bachelor's degree with advanced standing from other institutions the minimum requirements of residence and credits secured in residence are as follows: Residence for three quarters within a period of twelve months and a full year's work comprising at least nine courses or the equivalent. In this connection two summer terms are considered as one quarter.

Admission of Women

By action of the Trustees in February, 1897, women were made eligible for admission to the Graduate School of this institution. Almost immediately this action was extended so that women were eligible for admission to the two upper classes of the college. Some years later women whose training was found to be sufficient were admitted to the Professional Schools of Law, Medicine, Pharmacy, and later to courses in Engineering. By an extension of this action women are admitted to special courses in work that is not to be obtained in a college for women. Here are included the pre-medical and pre-dental courses and courses leading to such specialized scientific degrees as those in Chemistry and Geology. In the College of Liberal Arts and the School of Commerce the University admits women students having junior standing. The Trustees in June, 1931, voted to admit as freshmen or sophomores young women residing in Chapel Hill or within commuting distance provided they live with their parents (or guardian) who must be maintaining their residence as defined above. Mature women residing in Chapel Hill are admitted to such work as they are qualified to pursue. To the Division of Public Welfare and for special work in play-writing and play-production "mature special students" who cannot qualify for junior standing may occasionally be admitted for reasons which must be clear in any individual case.

Entrance Requirements

For admission to the Freshman Class of the University of North Carolina fifteen units secured by the completion of a four years' high school course are required. *The fifteen units must be chosen*

from the list printed below and in accordance with the restrictions stated in the foot-notes following that list. The applicant must either have an official certificate sent showing his preparatory work and the recommendation of his *school (which must be on the list of accredited schools) and a satisfactory report on "school citizenship" or stand entrance examinations on an equivalent amount of preparatory work as provided for above.

It must be clearly understood that admission to the University does not necessarily mean admission to candidacy for a degree.

In order for a student to be admitted to candidacy for a degree, he must meet the specific requirements laid down by the school or college in which the degree is conferred. In some cases this will make it necessary for the candidate to carry certain courses as prerequisites over and above the courses prescribed for the degree or to make up certain deficiencies. These deficiencies must be made good before the student may register for his sophomore year.

The preparatory student should decide therefore, as early as possible, for which degree he wishes to become a candidate and carry such courses in his preparatory school as will admit him to candidacy for that degree.

Subjects Acceptable for Entrance Credit

The complete list of subjects acceptable for entrance with the credit that may be secured in each subject is as follows:

English	4 units	Economics	½ or 1 unit
**History	1 to 4 units	‡Scouting	½ or 1 unit
Mathematics	2 to 4 units	¶Music	½ or 1 unit
Greek	1 to 3 units	‡Military Science	½ or 1 unit
Latin	1 to 4 units	***Vocational Subjects	
French	1 to 3 units	Commercial Geography	½ unit
German	1 to 3 units	Drawing	½ or 1 unit
Spanish	1 to 3 units	**General Agriculture	½ to 2 units
†Biology	½ or 1 unit	Bookkeeping	1 unit
†Botany	½ or 1 unit	Commercial Arithmetic	1 unit
†Chemistry	½ or 1 unit	Stenography and Typewriting (together)	1 unit
†Physics	½ or 1 unit	Manual Training	½ to 2 units
†Zoölogy	½ or 1 unit		
†General Science	½ or 1 unit		
†Physiography	½ or 1 unit		
Physiology	½ unit		
Civics	½ or 1 unit		

* It is definitely understood that, in case an applicant has attended another school subsequent to graduation from a high or preparatory school, the recommendation of the school last attended is required.

** As many as four (4) units in history and two (2) units in agriculture may be accepted. This amount of credit will be allowed only when the Dean of Admissions is satisfied that the work done in these subjects at any given school is of a superior order.

† One (1) full unit in any of the sciences will be allowed only when satisfactory work is done in the laboratory as evidenced by the notebook; otherwise only one-half (.5) unit will be allowed.

‡ Entrance credit for this subject will be allowed only in case the certifying school credits it towards its diploma.

¶ Credit for music will be allowed only in case the work is shown by a supplementary certificate to conform with the standards set up by the Southern Association of Colleges and Secondary Schools and provided also the certifying school credits it towards its diploma.

*** Credit for vocational subjects is limited to a total of three (3) units.

PRESCRIBED REQUIREMENTS

The requirements for admission to candidacy for the different degrees in the College and in th eseveral Schools within the University are as follows:

THE COLLEGE OF LIBERAL ARTS

(The Degrees A.B., A.B.-LL.B., A.B. in Journalism, A.B. in Music)

English ..... 4 units
American History ..... 1 unit
Mathematics (Algebra, Plane Geometry) ..... 2½ or 3 units

Select Two:
- Greek ..... 2 units
- Latin ..... 2 units
- German ..... 2 units
- French ..... 2 units
- Spanish ..... 2 units

} 4 units

Electives to make total of 15 units

NOTE, that two foreign languages to the amount of not fewer than four (4) units (two units in each of two languages) are required for admission to candidacy for the A.B. degrees. The languages so presented must be continued as the required foreign languages, or the elementary courses (1 and 2) of a substituted language must be taken without credit towards the degree. Elementary Greek (1-2) and Elementary German (1-2), however, when completed satisfactorily *in this institution*, will be counted also as electives for degree credit.

THE SCHOOL OF APPLIED SCIENCE

(The Degree S.B.)

Bachelor of Science in Chemistry

English ..... 4 units
American History ..... 1 unit
Mathematics (Algebra, Plane Geometry) ..... 2½ or 3 units
French ..... 2 units
German ..... 2 units
Science ..... 1 unit
Electives to make total of 15 units

NOTE, that the requirements for admission to candidacy for the degree S.B. in Chemistry call for: French *and* German.

Bachelor of Science in Geology

English ..... 4 units
American History ..... 1 unit
Mathematics (Algebra, Plane Geometry) ..... 2½ or 3 units
French, German, or Spanish ..... 2 units
Science ..... 1 unit
Electives to make total of 15 units

NOTE, that the requirements for admission to candidacy for the degree S.B. in Geology call for: *One* modern foreign language.

Bachelor of Science in Medicine

English ..... 4 units
American History ..... 1 unit
Mathematics, (Algebra, Plane Geometry) ..... 2½ or 3 units
*German ..... 2 units
*French ..... 2 units
Electives to make total of 15 units

Requirements for admission to the Pre-medical or Pre-dental Curriculum:

English ..... 4 units
American History ..... 1 unit
Mathematics (Algebra, Plane Geometry) ..... 2½ or 3 units
French or German ..... 2 units
Electives to make total of 15 units

NOTE, that the requirements for admission to the Pre-medical or Pre-dental Curriculum call for: Either French or German.

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* The curriculum for this degree requires four courses of college grade work in French or German above the elementary courses 1 and 2 or two such courses in French *and* two such courses in German. If one language is taken that language must be continued through French 22 or German 22; if both languages are taken, the requirements are French through course 4 and German through course 4. Hence the entrance requirement is either French or German (if one language is to be taken) or both French and German (if both languages are to be taken).

THE SCHOOL OF ENGINEERING

(The Degree S.B.)

Bachelor of Science in Chemical, Civil, Electrical, or Mechanical Engineering

English	4 units	French, German, Spanish, Greek, or Latin	2 units
American History	1 unit	Science	1 unit
Mathematics (Algebra, Plane Geometry)	2½ or 3 units	Electives to make total of	15 units

NOTE, that the requirements for admission to candidacy for the degree S.B. in Chemical Civil, Electrical, or Mechanical Engineering call for: *One* foreign language.

THE SCHOOL OF COMMERCE

(The Degree S.B. in Commerce)

English	4 units	Select Two	Latin or Greek 2 units German 2 units French 2 units Spanish 2 units	4 units
American History	1 unit			
Mathematics (Algebra, Plane Geometry)	2½ or 3 units			
		Electives to make total of		15 units

NOTE, that the requirements for admission to candidacy for the degree S.B. in Commerce call for: *Two* foreign languages, one of which must be a *modern* foreign language, to the extent of two units in each language.

THE SCHOOL OF PUBLIC ADMINISTRATION

For the requirements for entrance to the School of Public Administration see under that school in Part Four.

THE GRADUATE SCHOOL

Holders of Bachelors' or Masters' degrees from standard colleges are admitted to the Graduate School upon presentation of their credentials. For further details the prospective student is referred to the Catalogue of the Graduate School.

THE SCHOOL OF LAW

Candidates for the Degree LL.B.

Students who are to be candidates for the degree of LL.B. must have completed such college work as will fit them for the study of Law. For detailed statement of the subjects required see under the School of Law, Part Five. First year students may not enter at the opening of the second term.

THE SCHOOL OF MEDICINE

Requirements for Admission to the Medical Curriculum

The minimum requirements for admission to the medical curriculum are two years (—60 semester hours) of college work, which must include a minimum of twelve semester hours in chemistry (including four semester hours of organic chemistry), eight semester hours in biology, eight semester hours in physics, six semester hours in English, and six semester hours in a foreign language beyond the amount required in the language chosen for admission to the University. *No student will be admitted with less than the equivalent of sixty semester hours of accredited collegiate work, or with a condition on any of the required subjects in science.* All admissions are made with the approval of the Dean of the School of Medicine. The maximum number admitted to the first year class is forty-two, to the second year class it is forty.

The Dean reserves the right to select from the entire list of applicants (usually many more than the number who can be admitted) those applicants who in his judgment are best qualified for the study of medicine. The fact that an applicant may have been registered in our curriculum leading to Bachelor of Science in Medicine does not obligate the Dean to admit him to the School of Medicine.

Admission to Advanced Standing

Candidates for admission to the second year of the medical curriculum must present certificates from an accredited medical school stating that they have had the required fifteen units, at least two years of college work as indicated above, and have completed the subjects of the first year of the medical course as outlined.

THE SCHOOL OF PHARMACY

Bachelor of Science in Pharmacy

English	4 units	French or German or	
American History	1 unit	Latin	2 units
Mathematics (Algebra, Plane Geometry)	2½ or 3 units	Electives to make total of	15 units

NOTE, that the requirements for admission to candidacy for the degree S.B. in Pharmacy call for: French or German or Latin.

THE SCHOOL OF LIBRARY SCIENCE

A detailed statement covering the requirements for admission as a candidate for the degree of Bachelor of Arts in Library Science will be found under the school of Library Science, Part Five.

EXPENSES

The University reserves the right to make, with the approval of the proper authorities, changes in any fees at any time.

Tuition and Other Fees for Each Quarter

By regulation of the Board of Trustees a differential of one hundred dollars ($100.00) a scholastic year is charged each student not a resident of North Carolina by the definition of the Board.

College of Liberal Arts:	Residents of N. C.
Tuition	$25.00
Matriculation (see * on next page)	14.50
Student Publications	2.00
Laundry Deposit	8.50
Student Union fee	1.00
Total for each quarter	$51.00

For Entertainment Fee see p. 45.

School of Engineering:	
Tuition	$33.34
Matriculation	14.50
Student Publications	2.00
Laundry Deposit	8.50
Student Union fee	1.00
Total for each quarter	$59.34

School of Applied Science:

Same as for the College of Liberal Arts.

School of Commerce:

Same as for the College of Liberal Arts, plus an additional fee of $1.00 for reading and materials for each quarter.

School of Public Administration:

Same as for the College of Liberal Arts.

Graduate School:

Same as for the College of Liberal Arts.

	Residents of N. C.
School of Law:	
Tuition for fall and spring terms, each	$50.00
*Matriculation fee each term	21.75
Student Publications fee each term	3.00
Student Activities fee each term	2.50
Laundry Deposit each term	12.75
Student Union fee each term	1.50
Total for each term	$91.50
School of Medicine:	
*Tuition and Matriculation	$83.34
Student Publications	2.00
Laundry Deposit	8.50
Student Union fee	1.00
Total for each quarter	$94.84
School of Pharmacy:	
Tuition	$28.34
*Matriculation	14.50
Student Publications	2.00
Laundry Deposit	8.50
Student Union fee	1.00
Total for each quarter	$54.34

School of Library Science:

Same as for the College of Liberal Arts, except that the student should expect to spend about $15.00 for textbooks and special material and $25.00 for trips to visit libraries.

An Entertainment Fee of $1.00 each quarter is collected from each student in the College of Liberal Arts and the School of Commerce for a program as voted by representatives of these two groups.

LAUNDRY DEPOSIT: Students will be required to send their washing to the University Laundry for which a deposit will be collected at the time of registration.

LABORATORY FEES: Each student taking a laboratory course must pay, in addition to his tuition fee, a small fee for power or materials used in the laboratory. The fees for the various laboratory courses are as follows:

BACTERIOLOGY

1	$ 4.00	3	$10.00
2, 5	6.00	(Non-med. students)	
(Non-med. students)			

* This fee includes fee for physical education, the library fee, the fee for infirmary service, and the fee for debates.

Botany

1, 21, 41, 42 (45), 43, 52	$ 4.00 a quarter	211, 212, 213, S214	$ 4.00 a quarter
103, 111, 112, 113, 122, 133, 141, 151, 153, S154	4.00 a quarter	251, 252, 253, S254	4.00 a quarter
		301, 302, 303	4.00 a quarter

Chemistry

1-2	$ 5.50 a quarter	121, 122, 123	$10.00 a quarter
31, 41, 42, 61, 62, 91, 92	10.00 a quarter	163, 164, 165	10.00 a quarter
71	10.00	167, 168, 191, 192	10.00 a quarter
81, 82, 169, 185	7.00 a quarter	341, 351, 361, 381, 391	10.00 a quarter
93	5.00		

Commerce

61, 161	$ 1.00 a quarter	177	$ 2.00
71, 71P, 72, 171	3.00 a quarter	179	2.50
172, 173, 175	3.00 a quarter		

Economics

9	$ 3.50	71, 271	$ 2.00 a quarter
11	3.00	171	1.00

Engineering

G.E. 36bc	$ 4.00 a quarter	E.E. 22b	4.00
Ch.E. 94	7.00	E.E. 52abc, 62abc	5.00 a quarter
Ch.E. 191	$10.00	E.E. 97abc	3.00 a quarter
Ch.E. 391	10.00 a quarter	E.E. 162abc	7.00 a quarter
C.E. 25a, 30a, 40a, 65a	4.00 a quarter	E.E. 382abc	10.00 a quarter
C.E. 35a	6.00		
C.E. 60a	10.00		
C.E. 160abc, 165abc	4.00 a quarter	M.E. 53abc, 63abc	5.00 a quarter
C.E. 280a	2.00	M.E. 73	5.00
C.E. 285abc	2.00 a quarter	M.E. 78abc, 166a, 186a	5.00 a quarter
C.E. 290abc, 360abc, 365abc, 370abc	5.00 a quarter		

English

55, 56, 57, 63	$ 2.00 a quarter	225, 226, 227	$ 2.00 a quarter
61, 62, 64, 65, 66	1.00 a quarter		

Geology

11, 12, 41	$ 3.00 a quarter	56	$ 2.00
14	2.50	77, 78, 123, 131, 133, 134	3.50 a quarter
43-44, 105	5.00 a quarter	171, 172, 173	3.50 a quarter
45, 51, 52, 53	2.50 a quarter		
47, 111-112, 121-122	3.50 a quarter		

Journalism

53, 54, 55	$ 2.00 a quarter

Materia Medica

55	$ 5.00	391, 392, 393	$10.00 a quarter

PHARMACEUTICAL CHEMISTRY

43, 70	$ 5.00 a quarter	62, 63, 141, 172, 173, 242, 243, 245, 261, 262, 263, 391, 392, 393	$10.00 a quarter
64, 161, 162, 163	7.50 a quarter		

PHARMACOLOGY

55	$ 5.00

PHARMACY

11	$ 3.00	21, 81, 82, 141, 144, 145, 146, 191, 192, 193, 391, 392, 393	$10.00 a quarter
12, 22, 93	5.00 a quarter		
91, 92	7.50 a quarter		

PHYSICS

21-22	$ 4.00 a quarter	104, 105	$ 3.00 a quarter
21E, 22E, 23E	2.75 a quarter	107, 108	5.00 a quarter
51	15.00		

PSYCHOLOGY

21-22	$ 4.00 a quarter	151, 152, 153	$ 3.00 a quarter
125, 135, 136, 138	2.00 a quarter	201	4.00
145, 146	1.00 a quarter	202, 203, 205	2.00 a quarter
147	3.00		

ZOÖLOGY

41b, 42b, 103, 104, 105	$ 5.00 a quarter	209, 210, 211	$ 5.00 a quarter
106, 107, 108, 109	5.00 a quarter	212, 213, 214, 215	5.00 a quarter
		316	3.00 or 5.00

TRANSCRIPTS OF RECORD. One transcript will be furnished without charge. Additional transcripts will be furnished only upon payment of $1.00 for each copy.

GRADUATION FEE. The fee for a diploma is $10.00 payable when application for the degree is made.

Board

Excellent board is furnished at Swain Hall for $20.00 a month. A few students can earn their board by waiting on the tables.

Board without room can be obtained in the town from $20.00 to $35.00 a month.

Dormitory Accommodations for Men

Accommodations for approximately fourteen hundred students are available in the University dormitories.

All rooms in the dormitories are completely furnished. Students will, however, provide their own pillows, bed linen (for single beds), blankets, and towels.

Room rent ranges from $5.25 to $10.00 a month for each occupant, the price depending upon the location of the room. This charge includes light, heat, and service. Rooms are leased for the scholastic year. See p. 60 for assignment of rooms.

Residence for Women

The Cornelia Phillips Spencer Building is the dormitory for women. Women not living in their own homes are required to reside in the dormitory unless permission to live elsewhere is granted by the Adviser to Women, Mrs. M. H. Stacy. Ordinarily such permission is granted in exceptional cases only, and to graduate students.

Rooms in the dormitory are rented upon the basis of the full session; but the bill is payable in two installments, September 1 and February 1. The rooms are completely furnished. Students will provide, however, pillows, bed linen (for single beds), blankets, and towels. All persons living in the dormitory are required to board there also.

The cost of room and board for the session is $283.00 if the student shares a double room, or $328.00 if the student occupies a single room. Details of the payments to be made for room and board may be found in the Handbook for Women Students or by correspondence with Mrs. M. H. Stacy.

PECUNIARY AID

FELLOWSHIPS AND SCHOLARSHIPS

The Ledoux Fellowship in Chemistry. (Established in 1911 by Dr. Albert R. Ledoux.) The holder is expected to devote himself to research in chemistry. This fellowship is endowed, and yields $300 annually.

The Graham Kenan Fellowship in Philosophy. A fellowship supported by the income from an endowment of twenty-five thousand dollars, established in 1921, by Mrs. Graham Kenan, in memory of her husband, an alumnus and trustee of the University. This fellowship is awarded annually by Professor Henry Horace Williams.

The Moore Scholarships. (Established in 1881). Bartholomew Figures Moore, of Raleigh, bequeathed $5,000, the interest of which shall be devoted to paying the tuitions of students.

The Mary Ruffin Smith Scholarships. (Established in 1885.) Miss Mary Ruffin Smith bequeathed to the University in memory of her brother, Dr. Francis Jones Smith, a valuable tract of land in Chatham County of 1,460 acres, known as Jones' Grove. The will provides that rents of the land, or the interest on the purchase money if sold, shall be used to pay the tuition of such poor students as the Faculty shall appoint.

The Mary Ann Smith Scholarships. (Established in 1891). Miss Mary Ann Smith bequeathed $37,000 for the foundation of scholarships, the number of scholarships to be determined by the amount of the income.

The Cameron Scholarships. (Established in 1892.) The heirs of Paul Carrington Cameron founded in his memory ten scholarships of the value of $75 each.

The Speight Scholarships. (Established in 1892). The late Mrs. Mary Shepherd Speight bequeathed $10,000 to the University. The income shall be used to pay the tuition of needy students; but if tuition is ever made free, the income shall be used toward paying the salaries of professors.

The Wood Scholarship. (Established in 1892). Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her late husband, Dr. Thomas Fanning Wood, a scholarship of the value of $75.

The Dialectic and Philanthropic Literary Societies' Scholarships. (Established in 1893). The Dialectic and Philanthropic Lit-

erary Societies of the University founded two scholarships of the value of $75 each, recipients of which shall give assistance in the Library.

THE WEIL SCHOLARSHIP. (Established in 1898). A fund established by Mr. Henry Weil, of Goldsboro, furnishes one scholarship of the value of $75.

THE ARMFIELD SCHOLARSHIPS. (Established in 1901 and 1904). These scholarships were founded by the generosity of the late Mr. Eugene M. Armfield, of High Point, N. C., a member of the class of 1888.

THE KENNETH MURCHISON SCHOLARSHIPS. (Established in 1904). These scholarships have been founded by Mrs. Shirley Carter, of Baltimore, Md., and the late Mrs. James Sprunt, of Wilmington, N. C., in memory of their father. They are awarded by the founders.

THE DONALD FAIRFAX RAY SCHOLARSHIP. (Established in 1919). Mrs. N. W. Ray, of Fayetteville, N. C., has established this scholarship in memory of her son, Donald Fairfax Ray, a graduate of the University, who died while in the service of his country.

THE HOLT SCHOLARSHIPS. Four scholarships are maintained by the income from the Holt Loan Fund, established in 1920 by Mr. Lawrence S. Holt, Jr. They are awarded by the Committee on the Holt Fund, to a member of each of the four classes in the Academic Department. Applications are considered after the opening of the University in the fall.

The ALUMNI SCHOLARSHIPS. These scholarships have been established by the gifts of Alumni, and they vary in stipends according to the funds in hand.

THE R. H. LEWIS SCHOLARSHIPS. Four scholarships, endowed by the University Gymnasium Association, and called The R. H. Lewis Scholarships, are assigned by the President, and are good for tuition in the Academic Department.

THE MRS. AUGUSTUS H. JONES SCHOLARSHIP was created by a gift of two thousand dollars from Mrs. James H. Parker, of New York City, the income to be used for one scholarship. The recipient of this scholarship is to be designated by Mrs. James H. Parker during her life and thereafter upon the recommendation of the New York Chapter of the United Daughters of the Confederacy. Failing this recommendation from either source, appointment is to be made by the President of the University, preference being given first to relations of the late Dr. James H. Parker, of New York, and second to relations of the donor.

The George Newby Toms Scholarships. Established 1926 by Mr. C. W. Toms, in memory of his son, George Newby Toms. The income from a fund of $5,000 is granted by the University as scholarships to worthy students, preference being given to students from Durham and Perquimans counties in North Carolina.

The General Robert Ransom Scholarship. This scholarship to the value of $200 is awarded each year to a lineal descendant of a Confederate Veteran. It is awarded and controlled by the United Daughters of the Confederacy in North Carolina.

The Jefferson Davis Essay Scholarship. Awarded each year by the United Daughters of the Confederacy in North Carolina to the high school graduate who writes the best essay on Jefferson Davis. Value $200.

William Blount Rodman Scholarships. Two scholarships assigned to students at the University from the memorial trust fund created by Colonel W. B. Rodman in memory of his father, William Blount Rodman. They are assigned by the State Superintendent of Public Instruction, Trustee of the fund.

The Daniel G. Fowle Scholarship. One scholarship, founded in 1928 by Mrs. Walter F. Stearns (Mary H. Fowle) in memory of her father, Governor Daniel G. Fowle. Mrs. Stearns reserves the right to award the scholarship to a member of her own family; otherwise it will be awarded by the Superintendent of the Raleigh Schools and the Principal of the Raleigh High School to one Raleigh student on the basis of merit, character, and scholarship. Value annually $100.

The Mary K. Brown Memorial Scholarship. (Established in 1931). A fund was established by Mrs. James M. Brown in memory of her daughter, who served with unusual devotion as Secretary of the School of Commerce of the University. The Scholarship is awarded to a worthy student who is dependent upon his own efforts to secure an education.

None of these scholarships is open to students in the Schools of Law, Medicine, Pharmacy, and Library Science. For scholarships open to students in these Schools, please see Part Five of this Catalogue.

This list does not include certain annual contributions for scholarships, which are not on an endowment basis.

All applications for scholarships must be filed in the President's office on or before April first, and must be in the regular form prescribed by the University. Blank forms are supplied on application to the President.

FREE TUITION

Free tuition is given to indigent residents of North Carolina who are also under bodily infirmity.

LOAN FUNDS

The Deems Fund. (Established in 1879). A fund of $600 was established by Rev. Charles Force Deems, D.D., late pastor of the Church of the Strangers, New York City, formerly a professor in the University, in memory of his son, Lieut. Theodore Disosway Deems. In 1881 the gift was greatly enlarged through the munificence of Mr. William H. Vanderbilt by a gift of $10,000 "as an addition to the Deems fund, to be loaned to indigent students of the University."

The Martin Fund. This fund has been established by the bequest of Mr. Thomas D. Martin, of Raleigh. Only the interest of the fund can be used for loans. It became available during the session of 1908-1909.

The Hogue Fund. A fund of $4,000 has been established by the Rev. R. W. Hogue, of Baltimore, the income from which is to be loaned to worthy students in the University.

The Hewitt Fund. A fund of $18,700 was established in 1916 by the bequest of Mr. Joseph Henry Hewitt, of Princess Anne County, Virginia. Only the income from this fund can be used for loans to "needy and deserving students" of the University. This fund became available during the session of 1919-1920.

The Holt Fund. A fund of $10,000 has been established by Mr. Lawrence S. Holt, Jr., of Burlington. The principal of this fund is to be loaned to "worthy and needy students of the University." The income from this fund is to be used in establishing four scholarships in the University. It became available during the session of 1920-1921.

The Victor S. Bryant Fund. A fund of $7,500 has been established by the bequest of Mr. Victor S. Bryant, of Durham. The principal and the interest of this fund can be used for loans to "worthy and needy young men" at the University. This fund became available during the session of 1920-1921.

The Masonic Loan Fund. A fund of $1,250 has been established by the Grand Lodge of Masons, the Grand Chapter of Royal Arch Masons, and the Grand Commandery of Knights Templar of North Carolina, for the purpose of "assisting worthy boys and girls to secure an education." The principal of this fund is loaned, and the interest is added thereto. The fund became available in the fall of 1922, and has since been increased.

The Seely Fund. A fund of $1,000 has been established by Mr. F. L. Seely, of Asheville, the principal of which is to be loaned to worthy and needy students, and the income therefrom to be added to the principal. This fund became available during the fall of 1922.

The E. S. Blackwood Memorial Loan Fund, created by bequest of Miss Katherine B. Blackwood, of New York City. This fund

consists of $10,000 "to be used as a loan fund for needy students." This fund is administered in the same manner as the Deems fund.

THE A. B. ANDREWS LOAN FUND. In May, 1925, the five children of the late Colonel A. B. Andrews (William J. Andrews, class of 1891; Alexander B. Andrews, class of 1893; Mrs. W. M. Marks; John H. Andrews, class of 1897, and Graham H. Andrews, class of 1903) established a fund of $2,500 of which the principal and interest are to be loaned to worthy students. This fund has been increased to $4,500 through the subsequent gifts from Mr. Alexander B. Andrews, of Raleigh, N. C. The A. B. Andrews Loan Fund is administered as are other loan funds from the University and is established as a memorial to Colonel A. B. Andrews, a noted railroad builder in North Carolina and a Trustee of the University. It is requested by the donors that assistance from this fund be rendered first to students from those counties of North Carolina in which Colonel Andrews built railroads and second to those counties through which lines of the S. A. L., Norfolk-Southern, and Southern railway systems run.

THE J. E. LEAR FUND. This fund of $5,244 became available in 1924 as a fund upon which students in the School of Engineering, especially students in electrical engineering, would have first claim. The fund was the result of installation work done by the senior class in electrical engineering under the supervision of Professor J. E. Lear.

THE POGUE LOAN FUND. The fund of $1,000 was presented to the University in April, 1930, by Mrs. Joseph E. Pogue as a memorial to her husband, the late Mr. Joseph E. Pogue, the fund to be known as the Joseph E. Pogue Loan Fund. The principal and interest are to be loaned to deserving students.

THE EDMONDS LOAN FUND. The fund of a little over $800 has been set up by the Class of 1910 as a memorial to W. R. Edmonds, a member of that class.

GRAIL LOAN FUND. In June, 1930, the Order of the Grail, an undergraduate organization at the University of North Carolina, gave $1,400 to be known as the Grail Loan Fund. The principal of this fund is to be loaned to worthy students and the income is to be used as the Grail Scholarship. This scholarship, at present a cash award of $60, is to be made each fall to that member of the entering class who as a senior in a North Carolina high school made the highest score on the annual State-wide examination conducted by the North Carolina College Conference.

THE ALUMNI LOYALTY LOAN FUND. Established on June 30, 1930, by the advance of $12,200.00 out of the Alumni Loyalty Fund.

The Alden Joeph Blethen III Memorial Lending Fund. During the fall of 1930, Col. C. B. Blethen, of Seattle, Wash., gave $2,000 to be known as the Alden Joseph Blethen III Memorial Lending Fund. This he did as a memorial to his son, A. J. Blethen III, a member of the Class of 1934. The principal of the fund is to be loaned to deserving students.

The Rockingham County Alumni Loan Fund. A fund of $713.32 advanced by the Rockingham County Alumni Association, available since January 11, 1932. It may be recalled by the lender as it may desire.

Escheats Fund. According to State law, clerks of court are directed to forward to the University money included in estates for which no heir can be discovered. For these funds the University is merely custodian for a period of years during which any heir discovered may legally claim the funds. During this period the money is placed in the Student Loan Funds as a temporary investment.

The Emergency Student Loan Funds

In the winter and spring of 1932, the University confronted a genuine emergency growing out of an announced reduction of state appropriations by 30%, and the fact that between five hundred and seven hundred students were without funds with which to continue their course. When this situation was presented by President Graham, students ($2,057.14), faculty ($2,035.38), the people and community organizations of Chapel Hill ($970.22), various chapters of the D. A. R., U. D. C., and other committees of women, began building a student loan fund. Alumni and friends of the University everywhere contributed to raise the total of new loan resources to $109,000.00, known collectively as "The Emergency Student Loan Fund." The portions of that fund which for some appropriate reason were separately established are listed below. Unless otherwise indicated, the funds are loaned on the same terms as is the Deems Fund.

The W. C. Coker Loan Fund. A fund of $500.00 established February 2, 1932, by Dr. W. C. Coker, head of the Botany Department of the University.

The Jessie Kenan Wise Loan Funds. A loan fund of $25,000.00 established February 4, 1932, by Mrs. Jessie Kenan Wise, of Wilmington, N. C., and another loan fund of $47,000.00 in securities, the income from which may be loaned to students immediately, and the principal may be similarly used when available through the sale of the securities as opportunity for sale on favorable terms may arise.

The Burton Craige Loan Fund. A fund of $1,000.00 established February 6, 1932, by Mr. Burton Craige, 1897, of Winston-Salem, N. C.

The James A. Gray Loan Fund. A fund of $500.00 established February 15, 1932, by Mr. James A. Gray, '08, of Winston-Salem, N. C.

The Blair Loan Fund. A fund of $500.00 established March 2, 1932, by Col. David H. Blair, '98, and Mrs. David H. Blair, of Washington, D. C.

The Sarah Watts Morrison Loan Fund. A fund of $1,000.00 established March 4, 1932, by Mrs. Sarah Watts Morrison of Durham and Charlotte, N. C.

The Student Loan Fund of the North Carolina Congress of Parents and Teachers, Inc. A fund of $750.00 loaned to the student loan funds by Mrs. J. W. Burke, Treasurer, by authority of the organization named above.

The Sarah Graham Kenan Loan Fund. A fund of $1,000 established March 7, 1932, by Mrs. Sarah G. Kenan, of Wilmington, N. C., to be used first by a designated student. When repaid, Mrs. Kenan will indicate its further usage.

The Milo M. Pendleton Loan Fund. A fund of $1,000.00 established March 15, 1932, by Mrs. Katherine Pendleton Arrington as a memorial to her brother, Milo M. Pendleton, of the Pharmacy Class of 1902.

The Richmond, Virginia, Alumni Association Loan Fund. A fund of $320.00 given by the organization named above with the request it be set so as to receive annual additions from the donors. It has been available since March 29, 1932.

The Loan Fund of the Woman's Auxiliary, N. C. Pharmaceutical Association. A fund of $150.00 given by the above named organization, through its president, Mrs. F. W. Hancock, of Oxford, N. C. This fund has been available for Pharmacy students at the University since April 8, 1932.

The Edrington Spencer Penn and Charles Ashby Penn, Jr., Loan Fund. A fund of $1,000 established April 14, 1932, by Mrs. Charles Ashby Penn of Reidsville, North Carolina.

The C. W. Toms Loan Fund. A fund of $1,000.00 established May 19, 1932, by Mr. C. W. Toms, '89, of New York City, in memory of his son, the late George Newby Toms, '28.

The Margaret McCaull Carmichael Loan Fund. A fund of $1,000.00 established by Mr. W. D. Carmichael, '97, on May 25, 1932. Mr. Carmichael is a resident of Durham, N. C., and New York City.

THE JEFFERSON C. BYNUM MEMORIAL LOAN FUND. A trust fund established by Mrs. Jefferson C. Bynum in memory of her husband. The fund of $2,000.00 to be held in trust for the future education of her two sons, Jefferson C. Bynum, Jr., and Rufus S. Bynum. Pending the matriculation of the beneficiaries at the University, the fund may be loaned to University students.

THE ANNIE LOUISE WATTS HILL LOAN FUND. A fund of $1,000.00 established by Mr. John Sprunt Hill, of Durham, N. C., on June 4, 1932, as a memorial to his wife.

THE GEORGE BASLEY HISS LOAN FUND. A fund of $10,000.00 established by Mrs. Bertha T. Hiss, of Charlotte, N. C., in memory of her husband, George Basley Hiss. This fund has been available since June 30, 1932.

Applications for Loans

Applications for loans will be considered when made in person by students registered in the University. The funds are limited in amount and are loaned only on the security of two approved signatures and at the legal rate of interest. Application should be made to the Dean of Students as far in advance as possible.

Self Help

Many students are now working their way through college by every form of honorable labor. A number are here as a result of money earned or borrowed. A few students are selected by the authorities as waiters at Swain Hall. Otherwise all opportunities available in the University and town must be secured by the personal efforts of the individual, with the assistance of the Self-Help Bureau of which Mr. Edwin Lanier is secretary. They are not assigned by the President of the University nor by the Executive Secretary nor by the Dean of Admission nor by the Dean of Students. Application should be made direct to the Self-Help Bureau of the Y. M. C. A. as far in advance as possible.

MEDALS AND PRIZES

The Mangum Medal in Oratory. (Established in 1878). A gold medal founded by the Misses Mangum, late of Orange County, in memory of their father, Willie Person Mangum, class of 1815, is continued by his granddaughter, Mrs. Stephen B. Weeks, and his great-grandson, Mr. Julian Turner, and is awarded to that member of the Senior Class who shall deliver the best oration at Commencement.

The Early English Text Society Prize. (Established in 1886). A special prize is offered annually by the Early English Text Society of London for advanced work in Anglo-Saxon and Middle English.

The Eben Alexander Prize in Greek. (Established in 1887). A prize of $10 is offered annually to that member of the Sophomore Class who shall present the best rendering into English of selected passages of Greek not previously read.

The Kerr Prize in Geology and Mineralogy. (Established in 1889). A prize of $50 is offered annually by Mr. William H. Kerr in memory of his father, Professor Washington Carruthers Kerr, to any undergraduate or graduate student for the best thesis containing original work in the geology or mineralogy of North Carolina.

The Bingham Prize in Debate. (Established in 1899). This prize is offered by Mr. R. W. Bingham, in memory of his great-grandfather, grandfather, father, and brother. It is given annually, for excellence in debate. The contestants are representatives of the Literary Societies, and the contest is held during Commencement.

The Bryan Prize in Political Science. (Established in 1903). A prize will be given annually for the best thesis in Political Science. The fund was established by the late William Jennings Bryan.

The Hunter Lee Harris Memorial. (Established in 1903). Dr. Charles Wyche, of St. Louis, offers annually, in memory of Hunter Lee Harris, of the class of 1889, a gold medal for the best original story by any student in the University.

The Archibald Henderson Prize in Mathematics, formerly the William Cain Prize. (Established in 1908). A gold medal is offered annually to that student who shall take the highest rank in Mathematics 24-25. No student will be recommended for the prize unless he attains to grade B.

Mary D. Wright Memorial Medal, given by Mr. P. E. Wright of Landis. A $25 gold medal will be awarded to the best speaker on the winning team of the two Literary Societies in their annual debate held in December.

THE MILDRED WILLIAMS BUCHAN PRIZE. (Established in 1920). A fund of one thousand dollars was given by Mr. Edward Robertson Buchan in memory of his wife. The income of this fund is to provide a prize in the Department of Philosophy.

THE PATTERSON MEDAL. (Established in 1924). A gold medal is offered annually by Lieutenant Commander D. F. Patterson, U. S. N., Mr. Albert F. Patterson, and Dr. Joseph F. Patterson to commemorate the memory of their brother, John Durant Patterson. This medal is awarded for a general excellence in athletics to a student selected by a special committee.

THE DELTA SIGMA PI SCHOLARSHIP KEY. The Alpha-Lambda Chapter of Delta Sigma Pi awards annually a gold scholarship key. This key is presented to that Senior, who, upon graduation, in the opinion of the faculty, ranks highest in scholarship for the entire course in Commerce. Not upon scholarship only is the key awarded but also upon leadership and promise of future usefulness. This key may be awarded to any student in the School of Commerce regardless of whether or not he is a member of Delta Sigma Pi.

THE CHI OMEGA PRIZE. The local chapter of the Chi Omega fraternity offers a prize of $25 in gold to the student who for the college year does the best work in the Department of Sociology.

THE CARBIS A. WALKER ACCOUNTING AWARD. (Established in 1932). Mr. Carbis A. Walker, of Winston-Salem, offers annually a prize of $35 to a senior in the School of Commerce who is majoring in accounting. The award is made on the basis of a competitive examination in the field of accounting and business law.

Certain other prizes are offered in the Professional Schools of Law, Medicine, and Pharmacy. For these, see under the several schools.

REGULATIONS

SPECIAL NOTICE TO STUDENTS

This catalogue, issued in the spring of each year, is intended to give such a description of the work of the University and such a digest of its rules as are needed by students. Neither the courses announcecd nor the rules given are valid beyond the succeeding year, for before the end of the succeeding year a new catalogue will have been issued, superseding all previous catalogues. Ordinarily a student may expect to be allowed to secure a degree in accordance with the requirements of the curriculum laid down in the catalogue in force when he first entered the University, or in any one subsequent catalogue published while he is a student; but the faculty reserves the right to make changes in curricula, as in rules, at any time when in its judgment such changes are for the best interests of the students and the University.

FRESHMAN WEEK

In order to facilitate the process of adjustment which the freshman must pass through, the University has set up a "freshman week" program. The events of this week include mental and physical measurements, pre-registration counseling, special lectures on student traditions, library tours, and social gatherings, in addition to the registration for courses on Wednesday. This program begins with a meeting of the entire freshman class in Memorial Hall at 2:00 p.m. on Monday, September 17, 1934. All students entering the University for the first time in the Freshman class are required to be present at this and all other appointments comprising the program of freshman week.

REGISTRATION

All students are expected to present themselves for registration *Wednesday or Thursday, September 19 or 20, 1934,* between the hours of 9 a.m. and 5 p.m., at the places announced in the plan for registration. Freshmen are expected to complete their registration on *Wednesday, September 19;* all others on *Thursday, September 20.* All men registering here for the first time will report for physical examination to Dr. R. B. Lawson in the gymnasium; all women will consult Mrs. M. H. Stacy, Adviser to Women, in her office in the South Building, third floor. Bills for tuition and fees are payable at the time of registration. For the winter and spring quarters all students except those in the School of Law must register in December and March according to a schedule published immediately before the examinations for the fall and winter quarters begin.

Registration for credit for any course is limited to the first seven calendar days of a quarter, unless the late registration is approved by the instructor concerned, the Dean, and the Administrative Board (or the Special Faculty) of the school.

PAYMENT OF BILLS

Bills for the fall quarter are payable at the time of registration. Bills for the winter and spring quarters are payable at the Business office on the first class day of the quarter. Failure to pay or to make proper arrangements for payment results in the assessment of an extra fee of $5.00.

DELAYED REGISTRATION

The penalty for delayed registration for any quarter is one month of strict probation for each day of delay. No excuses will be accepted.

Any student registering later than the time appointed for his registration must pay five dollars ($5.00) as an additional fee for delayed registration. No excuses will be accepted.

ARRANGEMENT OF COURSES

Attention is called to the reduction of credit for freshman and sophomore courses when taken late in the student's career. See Part Three, Introductory Notes.

Each student, when he presents himself for registration, must submit a list of courses, required and elective, which he desires to pursue.

No student will be allowed to take fewer than three nor more than three and one-half courses without special permission of his Dean.

Students desiring to change their courses must make written application to their respective Deans for the desired changes. The application will be considered by the Dean and will be granted only after a careful consideration of the facts in each case. The written permission of the Dean must be presented at the office of the Registrar and payment be made of the fee of twenty-five cents for each item of change. Changes in registration are limited to the first seven calendar days of a quarter.

ASSIGNMENT OF ROOMS

The rooms in the University dormitories are assigned to students by the Cashier in the order of application, subject to the special regulations given below.

The University reserves the right to require any student whom for any reason it considers an undesirable tenant to vacate a room in the University buildings.

In order to retain his room for the next scholastic year, a student must file with the Cashier before May 25 an application and a deposit

of $5.00 as an option. Double rooms must be applied for by both intending occupants. The rooms thus applied for will be retained until September 1, when first payment of rent is due. The $5.00 option deposit will be forfeited in case the applicant or applicants do not themselves occupy the room and pay the rent. Rooms not applied for or made vacant by failure to pay at the proper date will be assigned in the order of application.

The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of an occupant of a room to sell or transfer his right to occupancy shall be deemed a fraudulent transaction. The penalty for violating this rule shall be the forfeiture of the room by the new lessee.

The occupant of a room will be held directly responsible for any damage done to the furniture in his room or to the room.

No dogs shall be kept in the University dormitories. Breach of this regulation leads to forfeiture of the room.

CONDUCT

By order of the Board of Trustees the Faculty is directed to dismiss from the University any student who is known to engage in drinking intoxicating liquors, gambling, hazing in any form (presence at hazing is regarded as participation), or to be guilty of dissolute conduct. See also Student Government, page 73.

Students persistently neglectful of duty, or addicted to boisterous conduct or rowdyism may be required to leave the University.

Students, unless *bona fide* residents of Chapel Hill, when suspended from the University for disciplinary reasons, must leave the campus and Chapel Hill within forty-eight (48) hours or forfeit the right to readmission at any time.

ATTENDANCE

ARTICLE I

Sec. 1. Regular class attendance is a student obligation.

Sec. 2. The unexcused absence is not recognized as a student privilege.

Sec. 3. Any student having attained the honor roll during two consecutive quarters shall be exempt during the ensuing quarter from the regulations governing absences and shall be exempt thereafter so long as that student maintains the honor roll average. To the foregoing regulation there are to be the following exceptions: (a) the privilege of absence does not apply to attendance requirements relative to written or laboratory work or to quizzes and examinations; (b) the privilege earned by the student shall be forfeited if that student is absent without excuse immediately before or immediately after holidays.

Sec. 4. Departments or instructors may, on occasion, permit the student to attend or engage in an educational activity other than that of the class as a substitute for class attendance.

ARTICLE II

Sec. 1. The keeping of daily class attendance records is an obligation of the instructor.

Sec. 2. Collection of daily absence reports is an administrative responsibility. These reports shall be conveyed daily to the Registrar's Office, where they shall be recorded promptly and be made available for use.

ARTICLE III

Sec. 1. Absences from class attendance for cause may be excused. Such absences are those due (a)* to participation on recognized University activities, as those of the Glee Club, Debating and Athletic teams, and the Playmakers, when occurring away from Chapel Hill, such excuses to be issued by the Registrar; (b)† those due to actual illness, testified to by the physician who attended the student in person during illnes; and (c)* those due to emergencies caused by extraordinary circumstances, when excused by the Dean of the School concerned.

Sec. 2. The Registrar's Office shall furnish to the student a record of excused absences for the information of instructors.

Sec. 3. The maximum number of unexcused absences shall not exceed, during any quarter, the number of weekly meetings of the class, provided that any department may impose penalties for a less number of absences.

Sec. 4. Absences immediately before or immediately after University holidays shall count as the maximum number described in Section 3 of this Article.

Sec. 5. Any student who has incurred the maximum number of unexcused absences shall be placed on attendance probation, and in case of an additional unexcused absence from any class, may be suspended from the University by his Dean. Before the decision is reached regarding suspension, the Dean shall confer with the instructor or the head of the department involved or both—that is, with the instructor or head of the department in which the maximum number of absences have been taken.

ARTICLE IV

Sec. 1. Any student who is absent from a quiz or an examination at the appointed time thereof without excuse as defined above in

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* Such authorized leaves of absence must be secured in advance.

† Excuses for illness must be reported within forty-eight hours from time of the beginning of the illness.

Article III, Section 1, will not be permitted to make up this quiz or examination. Any department may impose a fee not exceeding one dollar ($1.00) upon the student having excuse for such absence for the privilege of taking a special quiz or examination or a make-up laboratory exercise.

ARTICLE V

Sec. 1. No student unless exempted by Section 3, of Article I shall be given credit in the University for any course unless that student has attended at least 75 per cent of the class meetings of the course during the quarter in which it is offered.

Sec. 2. Departments may require students who have been absent, whether the absences are excused or not, to make up work covered during the periods thereof.

Other Regulations Governing Attendance

In any quarter, absences are counted from the first regular meeting of each class. In no case will a student be considered present at any class until he has been registered as a member of that class.

A student who has been dropped for absences from a sufficient number of classes to reduce his schedule to one course will be suspended from the University for the remainder of the quarter on the ground of neglect of duty.

The grade of a student who quits a course without the permission of the Dean of his College or School is recorded officially as F.

The grade of a student who drops a course in which he is failing at that time shall be recorded as F, unless, in the judgment of his Dean, the reason for his failure be circumstances clearly beyond his control.

A student who is absent from any class without permission on the day immediately preceding or immediately following a holiday or recess shall go on strict probation for thirty days. Any student may appeal his case in writing within five days to the Executive Committee of the faculty.

Attendance at chapel is required of Freshmen every week-day except Saturday and of Sophomores on Mondays and Fridays. Absence from chapel will subject the student to discipline by the Executive.

No student is allowed to absent himself from the University without written permission as provided in Article III, section 1. This permission may, at the discretion of the executive officer, be granted only upon the formal request of the parent or guardian.

EXAMINATIONS

Regular written examinations are required at the end of each quarter in all courses except those the nature of which is such as to make written examinations unnecessary.

Before receiving his degree each senior in the College of Liberal Arts and each senior in the School of Commerce is required to pass to the satisfaction of his major department an examination in the field of his major study. Such a comprehensive examination may be offered to a student only once in any one quarter. This rule became effective with the class receiving degrees in June, 1930.

Special examinations may be taken by students who have received the condition grade (E) at the period of the special examinations in September. Provided he has no conflict with a course regularly taken by him in the quarter such a student may take the examination with the class at any regular quarter examination in the same subject within a year after he has made the grade E. A senior who makes a grade of E in his last quarter of residence is allowed to take a special examination for removal of the E not earlier than three days after his last examination in that period of examinations. The grade E becomes F if the student fails to pass the examination whether in September or at a regular period.

Under no circumstances may a student stand a special examination to remove a condition grade (E) between the first and the last class days in any quarter.

Special examinations for students who have been officially excused from regular examinations on account of sickness or have been absent on account of some necessary cause may be held at suitable times fixed by the Registrar and the instructors concerned. Such examinations must be taken within twelve (12) months of the date of absence.

To be entitled to take a special examination within a quarter, or at the September period, or at a regular quarter examination period, the student is required to file with the Registrar at least one week prior to the examination period a written notice that he desires to take such examination.

Final examinations except in laboratory practice may not be held at any times other than those specified in the preceding regulations.

No examinations may be held later than 6:30 p.m.

All examinations must be held in Chapel Hill.

Examinations should be limited to a period of two hours. In courses in which a considerable portion of the examination is of a *practical* nature, the instructor may extend the time in his discretion.

No students other than the following may take the examination in any course: 1st—regularly enrolled members of the class whose names have been reported from the Registrar's office to the instructor as having registered in due form for the course; and 2nd—those whose names have been reported from the Registrar's office as having the right to take special examinations on that course.

Students absent from an examination without an official excuse or present and failing to submit examination papers are reported "absent." This mark is equivalent in every respect to grade F or failure, and is so reckoned in the office of the Registrar.

Each student is required to subscribe his name to the following pledge or its equivalent on every paper: "I hereby certify that during this examination I have neither given nor received aid." The instructor should not report a grade for any student whose examination paper lacks this pledge.

Papers handed in at a special examination by students who have been officially excused from the regular examination will be graded. All others will be marked "passed" or "failed."

Schedules of examinations at the ends of the terms and in September are to be so arranged that examinations set for the last day of the period shall be set for the first day of the next period.

The order of examinations for the removal of conditions in September, 1934, will be as follows:

Monday, September 17

8:30 a.m.	Botany	11:00 a.m.	Chemistry
	Engineering		Commerce
	Latin		Philosophy
2:00 p.m.	Geology	4:30 p.m.	Economics
	Psychology		Romance Languages
	Rural Economics		Zoölogy

Tuesday, September 18

8:30 a.m.	Compar. Literature	11:00 a.m.	Education
	Greek		English
	Physics		German
	Sociology		
2:00 p.m.	Music		
	Hist. and Government		
	Mathematics		

STANDING

After the close of each quarter reports of the standing of all students in all their studies are sent to parents or guardians. The reports are based upon the following system of marking:

Grade A, Excellent.
Grade B, Good.
Grade C, Fair.
Grade D, Barely passed.
Grade E, Conditioned.
Grade F, Failed.
*Grade I, Work incomplete.

When a student has shown marked deficiency in the use of English in any course, his grade in that course may have attached a "composition condition" (cc). This condition, while not affecting a student's

* The grade I may be converted into one of the other grades by completing within a period of twelve months such additional assignments as may be required by the instructor in the course. A grade of I not so converted becomes F.

eligibility for continuance in the University, must be removed before final credit will be allowed. Such conditions may be removed by the completion of the regular freshman courses in English, by passing a special examination (offered each quarter by the Department of English for this purpose), or by completing the non-credit course in elementary English composition.

A student must attain a grade of D to pass in any study. Grade E indicates that the student is conditioned but may remove the deficiency by special examination as explained above. Students receiving grade F must repeat the study to receive any credit for the same.

A student has the right to appeal as to grading of his examination paper by his instructor. The appeal must be made to the President within three months after the examination. The President will appoint a committee of three persons who shall consider the case and whose decision shall be final.

To be eligible for graduation a student must secure the grade of C or higher on at least half of his courses.

Interpretation of this ruling:

(1) The rule applies to all undergraduate students for work passed subsequent to September, 1930.

(2) A student who completes the required courses but with grades which do not entitle him to his degree will be allowed to take additional junior-senior courses until such time as he meets the requirement of the rule.

(3) Transfers with advanced standing will come under this rule only for those courses pursued at this Institution.

A student to be ranked as a Sophomore must have passed seven courses; to be ranked as a Junior, fifteen courses; to be ranked as a Senior, twenty-six courses.

Undergraduate students, in order to be eligible to continue in the University, must qualify according to the following requirements: A freshman must pass something in each quarter, in the first two quarters at least two courses (or the equivalent), and at least two courses (or the equivalent) in the third quarter. After the freshman year (three quarters) a student must pass at least two courses each quarter. Deficiencies may be made up by correspondence work or in summer school, in which case only credits exceeding one course credit so obtained shall count for readmission. In three quarters, therefore, a freshman must pass at least four courses, or five if he is making up a shortage by correspondence work or in summer school; and one above freshman year similarly must pass at least six courses, or seven if he is making good a deficiency by correspondence work or in summer school.

No student who fails to qualify under the above regulations may be readmitted to *any division* of the University except by a special vote of the Faculty or a delegated committee of the Faculty. This

delegated committee of the faculty will meet at 10:00 a.m. on the *last* Saturday in July, at 10:00 a.m. on the second day *before* the stated registration day at the opening of each quarter, and at 10:00 a.m. on the second day *after* the stated registration day at the opening of each quarter to consider written petitions of students who have definite and convincing reasons on which to base a request that the rule be waived. All petitions, except those of students in Law, Medicine, and Pharmacy, should be sent to the Dean of the College of Liberal Arts *in writing* and, to be considered, must be in his hands *before* the stated meetings in that quarter in which the student seeks readmission.

WITHDRAWALS

Formal withdrawal, which is a prerequisite to honorable dismissal or reëntrance to this institution, must be approved by the student's Dean to be valid. Such a withdrawal will be approved only after full investigation of the circumstances and after the lapse of twenty-four hours from the time the first application is filed with the Dean.

If a student withdraws after the mid-term and is reported as below passing in two or more courses, that quarter will be counted as a quarter in residence in all computations of his requirements for readmission. If a student withdraws before mid-term, it will be left to the discretion of the Dean as to whether or not that quarter is to be counted as a quarter in residence. The Dean's verdict will be indicated specifically on the form used for withdrawal.

GRADUATION

Each Senior will be officially informed by his Dean in September of all deficiencies standing against him.

The number of orations in the contest for the Mangum Medal is limited to four. The candidates must be Seniors in the College, the School of Applied Science, the School of Engineering, the School of Commerce, or the School of Public Administration, and must announce their subjects to their respective Deans by February 1. The orations shall be delivered in private near May 1 before a committee of the Faculty, who shall decide upon the relative merits of the orations. The four successful candidates are known as the Commencement Orators of the Senior Class.

FRATERNITIES

General Regulations. Students may join fraternities after registration at the opening of any quarter or term provided they are eligible under the special regulations of the Faculty. Pledging of a student to join a fraternity is not allowed until he has been in the University a specified length of time as follows: If he matriculates for the first time in the University in the Summer School or in the fall quarter, he may not be pledged until the regular pledge date for the quarter;

if in the winter quarter, until a similar date in that quarter; if in the spring quarter, until a similar date in that quarter. No student may be pledged during the Summer School, but, if a student remains in the Summer School for the full twelve weeks, it may be counted for him as a regular quarter towards meeting the requirements as to residence. A student entering the University with advanced standing, whether he enters an academic or a professional school, may not be pledged until the regular pledge date after the date of his matriculation in this institution; but in no case may a student be pledged during the Summer School.

TRANSCRIPTS OF RECORD

Honorable dismissal has reference to conduct and character only. It will not be granted unless the student's standing as to conduct and character is such as to entitle him to continue in this University. Furthermore, in every statement of honorable dismissal full mention will be made of any probation, suspension, or other temporary restriction imposed for bad conduct which is still in force when the papers of dismissal are issued.

Statement of record has reference to the recorded results of a student's work in the classroom. It will in every instance contain all the important facts pertaining to the student's admission, classification, and scholarship. In particular, no partial or incomplete scholastic record (for example, with failures omitted) will be given without clear evidence that it is partial or incomplete. If the student's scholarship has been such as to prevent his continuance in this University or to render him subject to any probation, suspension, or other temporary restriction which is still in force at the date of the record, a plain statement of any and all such facts will be included, and such information will be given as will make clear the system of grades employed, the number of exercises a week devoted to each course, etc.

Transcripts of record, except the first which is furnished without cost, will be made upon payment of one dollar ($1.00) for each copy desired.

ATHLETICS

Organization

The Athletic Council, consisting of three members of the faculty appointed by the President of the University, three Alumni elected by the General Alumni Association, three undergraduate students one of whom is the President of the student body, one the President of the athletic association, and one elected by the Undergraduate Monogram Club, the Director of Athletics, and the Assistant Director of Athletics, has direct control of all matters pertaining to athletics. The faculty members of the Council constitute the committee on eligibility and their decisions are final subject to review by the general faculty

only. The faculty members in conference with the President of the University have full veto power over all acts of the Council.

The University of North Carolina is a member of the Southern Conference. Therefore all participants in intercollegiate athletics must qualify under the following rules of that body.

Rules of Eligibility of the Southern Conference

The following rules apply to all sports:

Rule 1—*Bona Fide Students.* No one shall participate in any intercollegiate contest unless he is a bona fide graduate of an accredited public high school with at least fifteen Carnegie units or the equivalent certified by an approved preparatory school with the recommendation of the principal. Credits presented as a result of examinations conducted in accordance with standard accrediting agencies by a recognized examining board may be accepted. At least eleven of the fifteen units required for entrance must be in academic subjects.

Rule 2—No student shall be eligible for varsity athletics until he has passed 24 semester hours or 36 quarter hours. After a student has become eligible for athletics to be eligible for any ensuing year, he must have passed 24 semester or 36 quarter hours of the previous year, provided, however, that hours for the second and third quarters or second semester shall be regulated by the separate institutions.

Rule 3—*Migrant Students.* (a) No person who has participated in any intercollegiate contest in any branch of sport as a member of any college team shall be permitted to participate in any intercollegiate contest in the same sport as a member of a team of any institution of this Conference.

For the purpose of this rule, an intercollegiate contest is a contest played by the varsity or the freshman team.

(b) Students who have pursued courses of study at one University or college but who have not participated in any intercollegiate contest shall be eligible to participate in intercollegiate athletics at another institution, but only when they have satisfied the conditions as set forth in the one-year rule.

(c) Transfers from a junior college, normal school or other institution not offering a standard four-year course may be allowed to continue their athletic careers at the institution to which they transfer provided they conform to the one-year residence rule and to the five-year limit of participation, counting from the date of first matriculation in the junior college.

Students who have been in the preparatory department of a junior college, who have taken no college work but have played on the junior college teams shall not be eligible for freshman participation at Conference institutions.

Rule 4—*Limit of Participation.* Participation in intercollegiate athletics shall be limited to one freshman and three varsity years over a period of five consecutive years counting from date of first matriculation. Every student shall be allowed three years of varsity participation in each sport provided such participation falls within the five-year period herein defined.

Rule 5—*Compensation.* (a) No person who receives any compensation from his institution for services rendered by way of regular instruction shall be allowed to participate in any intercollegiate contest.

(b) No person shall be permitted to participate in any intercollegiate contest who has ever used his knowledge of athletics or his athletic or gymnastic skill for gain.

Note—This rule does not apply to any person who has worked in connection with a playground or a summer camp where the requirements do not call for a man with technical preparation in physical training.

(c) No athlete shall be the beneficiary of any loan fund, scholarship, or fellowship, that may not be held by other students in the institution who are not athletes.

Rule 6—Any college athlete who signs a contract or enters into any agreement, explicit or implicit, with a professional team shall not be eligible for intercollegiate athletics.

No student who has played on a baseball team recognized by the National Commission of Baseball Clubs shall be eligible for intercollegiate athletics.

Rule 7—No college player is permitted to play on an athletic team other than that of his own college during the college year.

FRESHMAN TEAMS. Freshman teams shall be composed of members of the freshman class only who shall not compete as such for more than one year, and shall be eligible under the rules of this Conference, except the one-year rule. For the purpose of this rule a freshman is a student who enters the institution from a high school or a preparatory school.

The freshman football teams of this Conference shall be allowed to play only five games in any regular season.

No freshman students shall be allowed to assemble for practice before the opening of college.

Special Rules of the University of North Carolina

In addition to the rules of the Southern Conference the following local rules apply to all students participating in intercollegiate athletics:

† For the purpose of this rule an intercollegiate contest is a contest played by the varsity or freshman team. This rule does not affect the limit of participation as defined in Rule 5.

* *Definition of "College."* The word "college" as used in this code means any educational institution which offers a standard four-year course leading to a baccalaureate degree and which requires at least fifteen Carnegie units for entrance.

1. No student will be allowed to take part in athletic contests entailing absence from the University whose parents (or guardians) object to such participation.

2. No student may be a candidate for the baseball team unless he has been in attendance during the preceding winter quarter without the express permission of the Faculty Committee on Athletics.

3. Inasmuch as a member of an athletic team of this University enjoys special honor in thus representing the University, this privilege shall be withheld from any student whose scholastic standing is discreditable. Any student reported as deficient in a majority of his classes may be prohibited by the Dean of his school from participating in any intercollegiate contest until the deficiency is made good.

4. No team will be allowed to be absent from the University for more than ten lecture days during any quarter.

5. No person may take part in preliminary football training before the opening of the fall quarter unless he be eligible to enter the University at the time of such training.

6. The manager of each athletic team shall submit to the Faculty Committee on Athletics a schedule of all engagements before positive arrangements are made.

7. No student shall play upon any athletic team except after physical examination by the University Physician.

8. Before any student can become a member or a substitute member of any athletic team of the University and take part in any intercollegiate contest he must make application to the Faculty Committee on Athletics and secure the endorsed approval of that committee on his application. It shall be the duty of the Faculty Committee on Athletics to have the Registrar of the University indorse such application to the effect that the applicant is a registered student of the University and has completed the scholastic requirements.

9. It is the duty of the Faculty Committee on Athletics to inquire into the athletic record of the applicant and it shall be the duty of the applicant to appear before the committee and answer on his honor such questions as the committee may see fit to ask.

10. It is the duty of the Faculty Committee on Athletics to require a pledge in writing of the applicant, certifying on his honor that he has never accepted, directly or indirectly, remuneration, compensatory gift, valuable consideration, or promise thereof for his athletic services. The applicant must satisfy the committee that he is in the proper and strict sense of the word an amateur before the committee indorses his application.

11. It is the duty of the Director of Athletics, the members of the coaching staff, the president and the treasurer of the Athletic Association, the members of the Athletic Council, the director of the gymnasium, and the captain of the team concerned to furnish the Faculty

Committee on Athletics, on request, a statement to the effect that each member of an athletic team is above their suspicion as to his eligibility to represent the University as an amateur before such player shall be allowed to take part in any contest.

12. To be eligible for intercollegiate athletics in any quarter a student must have passed during his preceding quarter at least two full courses or the equivalent.

REGULATIONS GOVERNING DRAMATIC, MUSICAL, DEBATING, AND SIMILAR ORGANIZATIONS

1. No student will be allowed to take part in dramatic, musical, debating, oratorical, or similar events entailing absence from the University whose parents (or guardian) object to such participation.

2. Any student who was in attendance at the University during a previous quarter must have passed, during his last quarter of attendance, satisfactory examinations upon at least two full courses or their equivalent, before he will be allowed to represent the University in any dramatic, musical, debating, oratorical, or similar event of a public nature.

3. Any student reported during the course of any quarter as deficient in a majority of his classes may be prohibited by the Dean of his school from participating in any dramatic, musical, debating, oratorical, or similar event until such deficiency is made good.

4. No team or club will be allowed to be absent from the University more than ten lecture days during any quarter.

5. No student having membership in more than one of these organizations, or in one of these and one athletic organization will be allowed to be absent from the University more than ten lecture days during any quarter.

STUDENT ENTERTAINMENT COURSE

By vote of the student body in the College of Liberal Arts and the School of Commerce, a fee of $1.00 a quarter is charged against each student in these two schools for the support of the Student Entertainment Course. Students in other schools may take advantage of the entertainment course at the rate of $3.50 for the year. The administration of the resulting fund is in charge of a special committee consisting of four students from the two schools and three faculty members.

STUDENT GOVERNMENT

The student body of the University is self-governing. The functions of this government are both disciplinary and constructive. These functions are exercised by the Student Council.

THE STUDENT COUNCIL, 1933-1934

HARPER BARNES, Chairman *ex officio*
LEE GREER, Vice-president
JOHN T. O'NEIL, Secretary

JULE MCMICHAEL	R. G. FLEMING	E. W. MARTIN
GRAHAM MCLEOD	R. R. WELLS	CARL DUPREE

The Student Council is composed of nine members, as follows: Representatives of the three upper academic classes, one representative from each of the professional schools of Law, Medicine, and Pharmacy, one representative elected by the other seven members of the Council, and the President of the Student Body. The member elected by the Council must be chosen from among those who have served on the Council before. The President of the Student Body is *ex officio* Chairman of the Council.

Student government, in so far as it is disciplinary, is based upon the honor principle. No code of rules is laid down to direct a student what to do and what not to do. The only standards are those of morality and gentlemanly conduct. The Student Council is the executive expression of the honor principle. It is the concrete expression of the moral University. Its members being elected of the students by the students, it is grounded upon, and gives expression to, student sentiment. The Council is not an organization of policemen, nor it is based upon a system of espionage. When any student is felt by his fellow students to be unworthy to remain in the University, the Council takes cognizance of this feeling. It examines the matter, finds the facts in the case, and decides upon the course to be pursued. If the student is found guilty of conduct unworthy of a University man, he is promptly required to withdraw from the University. Among the offenses demanding withdrawal may be mentioned drunkenness, cheating, and gambling.

PUBLIC LECTURES

THE JOHN CALVIN McNAIR LECTURES

HENRY HORACE WILLIAMS, *Chairman*

The lecture fund established by the will of John Calvin McNair, of the class of 1849, became available in 1906, and the interest therefrom rendered it possible to begin the lectures in 1908. The lectures are given once every two years. The honorarium for the lectures amounts to $1000 and the remainder of the interest from the fund provides for the suitable publication of the lectures. Under the will the objects of the lectures "shall be to show the mutual bearing of science and religion upon each other and to prove the existence of attributes (as far as may be) of God from nature."

The lectures for 1931-1932 were delivered by Dr. R. A. Millikan of the Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, California.

THE WEIL LECTURES

HOWARD WASHINGTON ODUM, *Chairman*

During the years 1914-1915 an unendowed lectureship on American Citizenship was established by the University. The first incumbent was ex-President William Howard Taft, who lectured on "The Presidency: Powers, Duties, Obligations, and Responsibilities." Since that time this foundation, named the Weil Lectures on American Citizenship, has been permanently established through the generosity of the families of Mr. Sol Weil and Mr. Henry Weil, of Goldsboro, N. C.

The series for 1932-1933 was delivered by Dr. Charles A. Beard. His general subject was: What Is National Interest?

UNIVERSITY ORGANIZATIONS

THE SENATE OF THE DIALECTIC LITERARY SOCIETY AND THE GENERAL ASSEMBLY OF THE PHILANTHROPIC LITERARY SOCIETY

The Dialectic and the Philanthropic Literary Societies were organized in 1795, the year of the opening of the University. Their existence has been inseparably linked with that of the University and they have shown remarkable power in developing character, as well as in training the intellect. They offer facilities for practice in debate, oratory, and essay writing; and their members become familiar with parliamentary law and procedure.

In 1919 the Philanthropic Society was reorganized on the plan of the General Assembly of the State and changed its name accordingly. Similarly in 1924 the Dialectic Society after reorganization became the Dialectic Senate.

THE ELISHA MITCHELL SCIENTIFIC SOCIETY

John Wayne Lasley, Jr., Ph.D., *President*
Ralph McCoy Trimble, C.E., S.M., *Vice-President*
James Munsie Bell, Ph.D., *Permanent Secretary*
Charles Dale Beers, Ph.D., *Recording Secretary and Treasurer*

The Elisha Mitchell Scientific Society holds monthly meetings during the college year for the discussion of scientific subjects. A *Journal,* which is the official organ of the Society and of the North Carolina Academy of Science, is issued quarterly. The objects of the society are to encourage scientific research and to record the results of such work, especially those that pertain to the natural history of the State. It is now in its fiftieth year. The volumes already issued contain more than six thousand pages. By the exchange of the *Journal* with more than three hundred scientific journals and periodicals many thousands of books and pamphlets have been collected, all of which are arranged in the University Library. The membership is at present restricted to the faculty and students of the University, and members of the staff of the State Department of Conservation and Development.

THE PHILOLOGICAL CLUB

Richmond Pugh Bond, Ph.D., *President*
John Coriden Lyons, Ph.D., *Vice-President*
Archibald Kenneth Shields, Ph.D., *Secretary*
Meno Hans Spann, Ph.D., *Treasurer*

The Philological Club meets in the lounge of the Graduate Club on the first Tuesday evening of each month during the college year.

Its membership consists of the faculty and advanced students in the language and literature departments of the University. The objects of the club are to stimulate original investigation in language and literature and to afford an opportunity for the interchange of views on subjects relating to such work. At each meeting papers are read and discussed.

DER DEUTSCHE VEREIN

MENO HANS SPANN, Ph.D., *Director and Adviser*

The Verein was established for the purpose of maintaining and stimulating among the officers and students of the University interest in German literature and music, life and customs, progress and achievements. The aim is to employ the German language as much as possible. The effort is made to provide students of German with an opportunity to perfect their pronunciation and to improve their control of the spoken language.

LE CERCLE FRANCAIS

BEVERLY REID THURMAN, JR., A.M., *Adviser*

Le Cercle Français holds bi-monthly meetings at which topics of general interest pertaining to French literature and French life, manners, and customs are discussed. The French language is employed exclusively. It is the aim of the club to stimulate interest in the French language, and to provide its members with an opportunity to hear idiomatic French spoken and to use the language with more facility. All officers and students of the University interested in the study of French are eligible for membership.

EL CLUB ESPAÑOL

FRANCES CLEMENT HAYES, M.A., *Adviser*

The membership of *El Club Español* consists of students of the University who are interested in Spanish. The object of the club is to stimulate interest in the language, literature, and customs of Spain, and to give its members an opportunity to hear and speak Spanish.

THE NORTH CAROLINA CLUB

SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Secretary*

The North Carolina Club was organized September 25, 1914, for the purpose of providing an open forum to review, interpret, and discuss the economic, social, and civic problems of the State. It is an organization composed of students and faculty members who are bent upon accurate, intimate acquaintance with North Carolina. The Club meets for an hour upon fortnightly Monday evenings for the

reading and discussion of a paper prepared by a member. Graduate and undergraduate college credit is given for creditable work provided the student registers in advance for Club credit. The studies of the North Carolina Club are given to the public in its annual Yearbook.

AMERICAN SOCIETY OF CIVIL ENGINEERS

The William Cain Student Chapter

Frederick Eugene Culvern, *President*

The purposes of the Chapter are to afford the student in Civil Engineering practice in the preparation and presentation of engineering papers, to give a working knowledge of parliamentary law, to develop the ability to speak extemporaneously, and to provide a contact between students, faculty, and visiting engineers.

Membership is open to all students of the Division of Civil Engineering.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

The University of North Carolina Branch

Clifton Morgan Garrison, *Chairman*

The aims of the Branch are to stimulate interest in modern problems in the various fields of electrical engineering, and to acquaint the students with the profession he is preparing to enter by means of papers presented by student members and practising engineers.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

The University of North Carolina Branch

Paul Robert Hayes, *President*

The object of the Branch is to assist the student, while receiving training in preparation to practise the profession of mechanical engineering, to gain a proper perspective of engineering work by enabling him to become acquainted with the personnel and problems of those actively engaged in this profession.

THE UNIVERSITY GLEE CLUB

H. Grady Miller, *Director*

This organization is open to all men students of the University. Voice classifications are held at the opening of each quarter. Students are afforded opportunity for the serious study and participation in performance of both secular and sacred vocal literature. Concert tours by a selected group of thirty men are made each quarter. Concerts on the campus are a feature of the activities of this organization.

THE CHAPEL HILL CHORAL CLUB

MRS. R. H. WETTACH, *President*

PROF. GEORGE M. MCKIE
MRS. O. F. RICHARDSON
MRS. H. R. TOTTEN
MRS. L. C. MACKINNEY
MR. W. L. HUNT
} *Executives*

MRS. A. S. WHEELER, *Pianist*
PROF. NELSON O. KENNEDY, *Organist*

The Choral Club, composed of both men and women of the faculty, townspeople, and the students, presents choral works of major character with orchestra, organ, and soloists. One concert occurs at Christmas time, a second in the winter, and another as a feature of the Commencement season. The Society is directed by the head of the voice department.

THE UNIVERSITY SYMPHONY ORCHESTRA

EARL A. SLOCUM, *Conductor*

Students, faculty, and townspeople compose this organization, the personnel of which numbers fifty-five. Regular concerts of symphonic literature are given each quarter with instrumental and vocal soloists assisting.

THE UNIVERSITY BAND

EARL A. SLOCUM, *Director*

This organization has a dual function. There is a band for public occasions, which appears at the football games and other University functions where the services of a marching band are required. This band makes one or more major trips away from the campus with the team during each football season. There is also the symphonic band, chosen from the outstanding players of the larger organization. This group plays only standard symphonic literature. Frequent concert appearances are made on the campus and throughout the State. Mr. Slocum is the director.

ALPHA RHO CHAPTER OF PHI MU ALPHA (SINFONIA)

This chapter of the national honorary musical fraternity is composed of students of music, and such other students and faculty members as reveal particular interest in the participation in musical performance. The members of the chapter act as hosts for all musical events occurring in Hill Music Hall throughout the year. In order to create a fund from which scholarships for worthy students of music may accrue, the Alpha Rho chapter of Sinfonia sponsors each year a concert by a world-famous musical artist. Madame Amelita Galli-Curci appeared in recital in January, 1932, under this plan. Fritz Kreisler,

violinist, appeared in February, 1933, under the management of the local chapter. Josef Lhevinne, pianist, was presented in February, 1934.

The Hill Music Auditorium, seating eight hundred people, with its four manual concert organ, is the home of recitals and concerts by faculty members, students in the department of music, and visiting artists. The Vesper Organ Series, given by Professor Nelson O. Kennedy, head of the department of organ, is presented on the second Sunday afternoon of each month throughout the school year. These programs represent musical literature from European and American composers. A series of recitals given by the faculty of the department of music occurs as announced throughout the year.

Both juniors and seniors in the department of music present recitals during the spring quarter.

THE CAROLINA PLAYMAKERS

Frederick Henry Koch, A.M., *Director*
Samuel Selden, A.B., *Associate and Technical Director*
Harry Ellerbe Davis, A.B., *Assistant Director and Business Manager*

The Carolina Playmakers is the University dramatic organization. Its purpose, as set down in the Charter, is: "First, to promote and encourage dramatic art, especially by the production and publishing of plays; Second, to serve as an experimental theatre for the development of plays representative of the traditions and present-day life of the people; Third, to extend its influences in the establishment of a native theatre in other communities." It is incorporated under the laws of the State of North Carolina as a non-stock corporation.

The Carolina Folk-Plays and other plays of American locale are written and produced in the University courses in Dramatic Composition and Production, members of the community of Chapel Hill —students, faculty, and townspeople—assisting. Those who contribute to the writing or producing of the plays constitute the membership of the organization. Any student may participate in any of the various departments of the work.

The Playmakers now have their own theatre building on the campus, fully equipped for all manner of experimentation and production. Besides this, their Forest Theatre furnishes an ideal setting for out-of-door productions. They have an adequate workshop for the construction and painting of scenery and for the making of costumes.

The large stage in the University auditorium, Memorial Hall, provides ample facilities for traveling professional companies.

YOUNG MEN'S CHRISTIAN ASSOCIATION

Francis Foster Bradshaw, *Chairman, Board of Directors*
John Marshall Acee, *President*
Julian Dallas Winslow, *Recording Secretary*
Harry Fulcher Comer, *General Secretary*
Edwin Sidney Lanier, *Self-helf Secretary*

The Young Men's Christian Association is an organization of students which seeks by precept and example to encourage right and wholesome Christian living. In this spirit it endeavors to extend a helping and active influence to every sphere of campus activity.

Not unaware of its essentially religious nature, it strives in every feasible way to make the religion of the campus very real and very genuine, and to uphold the Christian life as the ideal in conduct, thought, and temperament for every man. To those who are so inclined it offers unlimited opportunity for religious service and personal growth.

The Association has very greatly enlarged its program and staff in the past five years, keeping step with progress in all other departments of the University, and with the increase in student enrollment.

PART THREE

In this section are listed and described all courses offered in the regular sessions of the University except those in the professional schools of Law, Medicine, Pharmacy, and Library Science. For courses in these schools see PART FIVE.

NOTES ON THE METHOD OF NUMBERING AND COUNTING COURSES

A *course* meets five or six times a week; a *half-course* meets three times a week. Two hours of laboratory or field work count as one meeting. All work except in engineering is credited toward degrees either as whole or as half courses in accordance with the principles stated above.

In the event that required freshmen subjects are taken after a student begins his seventh quarter or required sophomore subjects after he begins his tenth quarter, such subjects carry half credit only. This rule applies to the class registered as freshmen in the year 1925-1926 and to all later registrants.

Courses with a double number are completed in two quarters, and in general credit will not be given until both quarters have been completed; for example, Economics 31-32. Certain of these courses meet only three times a week and together count as one course. Courses which meet five or six times a week for two quarters carry a credit of two courses.

Courses with three numbers require three quarters to complete, and in general credit will not be given for the work of one or two quarters only. Those meeting five times a week carry a credit of three courses; those meeting only three times a week carry a credit of one and a half courses.

Courses numbered from 1 to 10 are for freshmen only, from 11 to 20 are ordinarily for freshmen and sophomores, from 21 to 40 for sophomores, from 41 to 50 for sophomores (but open to juniors or seniors), from 51 to 100 for juniors and seniors, from 101 to 200 for advanced undergraduates and graduates, from 201 to 400 for graduates only. Courses numbered 301 to 400 are research courses. Undergraduates may not take courses numbered above 200 except by special permission of the instructor in the course and the head of the department. Courses numbered from 1 to 100 carry no credit towards any advanced degree.

DEPARTMENT OF BOTANY

Professors COKER, TOTTEN, COUCH; Teaching fellow SMITH; Assistants Misses HOLLAND, SCHOLZ, Messrs. DEANS, HEWITT, MATHEWS, RAPER.

Courses for Undergraduates

1. GENERAL BOTANY. Freshman elective. Credit: 1 course.

An introduction to the structure and classification of plants. Lectures with laboratory and field work. *Four lecture and four laboratory or field trip hours a week, fall or spring quarter. Laboratory fee, $4.00.* Professors Coker, Totten, Couch; Messrs. Smith, Deans, Hewitt, Mathews, Raper, Miss Holland.

(Botany s1, offered in the Summer Session, is open to Freshmen, Sophomores, Juniors, and Seniors.)

21. GENERAL BOTANY FOR PHARMACY STUDENTS. Sophomore requirement in the School of Pharmacy. Credit: 1 course.

A course designed for pharmacy students and is not open to those credited with Botany 1 or s1 or 41. *Four lecture and four laboratory or field trip hours a week, fall quarter. Laboratory fee, $4.00.* Professor Totten; Messrs. Smith, Deans, Mathews.

41. GENERAL BOTANY. Credit: 1 course.

This course is designed for more advanced students than is Botany 1 and is not open to those credited with Botany 1. *Four lecture and four laboratory or field trip hours a week, fall or spring quarter. Laboratory fee, $4.00.* Professors Coker, Totten, Couch; Messrs. Smith, Deans, Hewitt, Mathews, Raper, Miss Holland.

43. STRUCTURE AND CLASSIFICATION OF SEED PLANTS. Prerequisite General Botany. Credit: 1 course.

A continuation of general botany, with more advanced work in the structure and classification of seed plants. Special attention is given to the study of the local flora, and of the introduced ornamental plants found in the Arboretum, with some work in the propagation of cultivated plants. *Three lecture and six laboratory or field trip hours a week, spring quarter. Laboratory fee, $4.00.* Professor Totten.

(This course is given in the Summer Session as s43 by Professors Totten, Couch, and Mr. Mathews.)

42 (45). PHARMACEUTICAL BOTANY AND PHARMACOGNOSY. Prerequisite, General Botany. Credit: 1 course. Sophomore requirement in the School of Pharmacy; elective in the School of Applied Science; in the College of Liberal Arts credit is restricted to students preparing to study medicine and those whose major is in botany.

A study of drug plants; the structure of their parts and contents; the localization and identification of crystals, starches, mucilages, gums, oils, resins, glucosides, alkoloids, etc.; macroscopical and microscopical study and identification of crude drugs and their adulterants and some study and identification of their powers. *Three lecture and six laboratory hours a week, winter quarter. Laboratory fee, $4.00.* Professor Totten; Assistants.

52. ADVANCED PHARMACOGNOSY. Senior requirement in the School of Pharmacy for students in groups B and C. Prerequisite, General Botany and Botany 42. Credit: ½ course.

Advanced work in the study of drug plants; their cultivation, collection, curing, preparation for study; the evaluation of crude plant and animal drugs; with most emphasis upon the study and identification of powdered drugs and their adulterants. (Not offered in 1933-1934). *One lecture and four laboratory hours a week, winter quarter. Laboratory fee, $4.00.* Professor Totten.

Courses for Graduates and Advanced Undergraduates

103. STRUCTURE AND CLASSIFICATION OF THE ALGAE. Prerequisite, General Botany. Credit: 1 course.

A study of the morphology and classification of the Algae. Lectures, reports, laboratory and field work. The subject may be continued under the same number for more than one quarter as the subject advances, credit being given for each repetition. *Two lecture or report and six laboratory or field work hours a week, spring quarter. Laboratory fee, $4.00.* Professor Couch.

(This course is given in the Summer Session as s103 by Professors Totten and Couch.)

111, 112, 113, s114. STRUCTURE AND DEVELOPMENT OF THE FUNGI. Prerequisite, General Botany. Credit: 1 course each quarter.

A study of the morphology of the fungi, with special attention to plant diseases, to the culture and development of the lower fungi, and to the identification of mushrooms. Lectures, reports, laboratory and field work. *Two lecture or report and six laboratory or field trip hours a week, fall, winter, and spring quarters, and in the second term of the Summer Session. Laboratory fee, $4.00 a quarter.* Professors Coker, Couch.

122. STRUCTURE, GROWTH, AND CLASSIFICATION OF THE LIVERWORTS. Prerequisite, General Botany. Credit: 1 course.

Two lecture or report and six laboratory or field trip hours a week, winter quarter. Laboratory fee, $4.00. Professors Coker, Couch.

133. STRUCTURE, GROWTH, AND CLASSIFICATION OF THE MOSSES. Prerequisite, General Botany. Credit: 1 course.

Two lecture or report and six laboratory or field trip hours a week, spring quarter. Laboratory fee, $4.00. Professors Coker, Couch.

141. STRUCTURE, GROWTH AND CLASSIFICATION OF THE FERNS. Prerequisite, General Botany. Credit: 1 course.

Two lecture or report and six laboratory or field trip hours a week, fall quarter. Laboratory fee, $4.00. Professor Coker; Miss Holland.

151, 153, s154. ADVANCED WORK IN THE STRUCTURE AND CLASSIFICATION OF SEED PLANTS. Prerequisite, General Botany and Botany 43 or Botany s43. Credit: 1 course each quarter.

For each of these courses the student is required to collect, prepare herbarium specimens, and classify two plants each from twenty families of seed plants, with notes on the families and sketches to show the principal characteristics of one plant in each of these families. *One conference a week with the instructor, fall, spring, and the first term of the Summer Session. Laboratory fee, $4.00.* Professor Totten.

162. STUDIES IN THE HISTORY OF BOTANY. Prerequisite, two courses in botany. Credit: ½ course.

Readings and reports. This course may continue for more than one year as the subject advances, credit being given for each repetition. *Three hours a week, winter quarter.* Professors Coker, Totten.

Courses Primarily for Graduates

211, 212, 213, s214. ADVANCED WORK IN THE HISTOLOGY, MORPHOLOGY, AND PHYSIOLOGY OF THE FUNGI. Credit: 1 course each quarter.

The student is required to collect and prepare material for the miscroscopic study of special problems. Theses. These courses may be continued under the same numbers for more than one year as the subject advances, credit being

given for each repetition. *Fall, winter, and spring quarters, and the second term of the Summer Session. Laboratory fee, $4.00 a quarter.* Professors Coker, Couch.

251, 252, 253, s254. MORPHOLOGY OF SEED PLANTS. Credit: 1 course each quarter.

Advanced work in the embryology and anatomy of seed plants. The student is required to collect and prepare material fo rthe microscopic study special problems. Theses. These courses may be continued under the same numbers for more than one year as the subject advances, credit being given for each repetition. *Fall, winter, and spring quarters, and the first term of the Summer Session. Laboratory fee, $4.00 a quarter.* Professors Coker, Totten.

301, 302, 303. GRADUATE RESEARCH. Credit: 1 course each quarter.

Original work with thesis under the guidance of the instructor. These courses may cover most of the work of the student for several years, credit being given each quarter in accordance with the work done. *Laboratory fee, $4.00 a quarter.* Professor Coker.

DEPARTMENT OF CHEMISTRY

Professors BELL, WHEELER, CAMERON, DOBBINS, Associate Professors EDMISTER, CROCKFORD, WHITE; Assistant Professor BOST; Teaching Fellows CONSTABLE, KYKER, TURNER; Assistants ALEXANDER, BRENNER, CLIFFORD, COLEHOUR, FARR, FORE, LECONTE, LOFTIN, NICHOLSON, POWELL, THOMAS, WILLIAMS.

Courses for Undergraduates

1-2. GENERAL DESCRIPTIVE CHEMISTRY. Credit: 2 courses.

An introduction to the study of the principal non-metallic and metallic elements and their compounds. Lectures with laboratory work. *Four lecture and four laboratory hours a week, each course every quarter. Laboratory fee, $5.50 a quarter.* Lectures, Professors Bell, Wheeler, Cameron, Edmister; Readers, Messrs. Brenner, Loftin, LeConte.

Laboratory, Professor Edmister; Messrs. Early, Farr, Fore, Turner, Wilkinson.

6. GENERAL CHEMISTRY. Credit: 1 course.

Continuation of Chemistry 1-2 for S.B. Chemistry students only, with readings from selected German texts. *Five hours a week, spring quarter.* Professor Edmister.

31. QUALITATIVE ANALYSIS. Prerequisite, Chemistry 1-2. Credit: 1 course.

Laboratory work and lectures. *Three lecture and six laboratory hours a week, fall or spring quarter. Laboratory fee, $10.00.* Professor Dobbins; Messrs. Turner, Fore.

41. ELEMENTARY QUANTITATIVE ANALYSIS. Prerequisite, Chemistry 31. Credit: 1 course.

Gravimetric Analysis. Laboratory work, lectures, and stoichiometric exercises. *Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Professor Dobbins; Messrs. Constable, Colehour, Miss Thomas.

42. ELEMENTARY QUANTITATIVE ANALYSIS. Prerequisite, Chemistry 31. Credit: 1 course.

Volumetric Analysis. Laboratory work, lectures, and stoichiometric exercises. *Three lecture and six laboratory hours a week, winter or spring quarter. Laboratory fee, $10.00.* Professor Dobbins; Messrs. Constable, Colehour, Miss Thomas.

43. CHEMICAL EQUATIONS. Prerequisite, Chemistry 41, 42. Credit: 1 course.

A detailed study of the reactions of the elements and their compounds. Lectures and textbooks. *Five hours a week, spring quarter.* Professor Dobbins.

51. INORGANIC CHEMISTRY. Prerequisite, Chemistry 1-2. Credit: 1 course.

A detailed study of inorganic chemistry. Required of S.B. Chemistry students. Elective for students in A.B., or S.B. Chemical Engineering courses. *Five lectures a week, fall quarter.* Professor Cameron; Mr. Clifford.

61. ORGANIC CHEMISTRY. Aliphatic Series. Prerequisite, Chemistry 31. Credit: 1 course.

Three lecture and six laboratory hours a week, fall or winter quarter. Laboratory fee, $10.00 a quarter. Professors Wheeler, Bost; Messrs. Kyker, Williams.

62. ORGANIC CHEMISTRY. Aromatic Series. Prerequisite, Chemistry 61. Credit: 1 course.

Three lecture and six laboratory hours a week, winter or spring quarter. Laboratory fee, $10.00 a quarter. Professors Wheeler, Bost; Messrs. Kyker, Williams.

66. ORGANIC CHEMISTRY. Prerequisite, Chemistry 61, 62. Credit: 1 course.

Selected reading in organic chemistry from German texts. For S.B. Chemistry students only. *Five hours a week, spring quarter.* Professor Wheeler.

71. CHEMISTRY OF FOODS. Prerequisite, Chemistry 42, 61. Credit: 1 course.

The composition, digestion, absorption, and metabolism of foods. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Professor Bost.

81, 82. ELEMENTARY PHYSICAL CHEMISTRY. Prerequisite, Chemistry 42. Credit: 1 course each quarter.

Study of the properties of solids, liquids, and gases, and of their relation to chemical constitution. *Four lecture and four laboratory hours a week, fall and winter. Laboratory fee, $7.00 a quarter.* Professor Crockford; Mr. Farr.

86. PHYSICAL CHEMISTRY. Prerequisite, Chemistry 81. Credit: 1 course.

Selected reading in physical chemistry from French texts. For S.B. Chemistry students only. *Five hours a week, spring quarter.* Professor Bell.

91. FUELS AND COMBUSTION. Prerequisite, Chemistry, 41, 42, 81. Credit: 1 course.

Coal, petroleum products, and gas. *Three lecture and six laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Professor White; Mr. Brenner.

92. TECHNICAL QUANTITATIVE ANALYSIS. Prerequisite, Chemistry 41-42. Credit: 1 course.

Fertilizer, iron, steel, alloys, paints, cotton products, and food analysis. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Professor Crockford.

93. OPTICAL METHODS OF ANALYSIS. Prerequisite, Chemistry 41. Credit: 1 course.

Microscopic and microchemical methods. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Not offered in 1934.

121-122-123. RESEARCH. Prerequisite, Chemistry 61, 62, 81, 82. Credit: 3 courses.

Twelve laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter. Professors Bell, Wheeler, Cameron, Dobbins, Edmister, Crockford, White, Bost.

Courses for Graduates and Advanced Undergraduates

101. HISTORY OF CHEMISTRY. Prerequisite, Chemistry 61, 62, 81, 82. Credit: ½ course.

History of chemistry, with discussion of the development of chemical theories. *Three hours a week, spring quarter.* Professor Cameron.

163. IDENTIFICATION OF PURE ORGANIC COMPOUNDS. Prerequisite, Chemistry 61, 62. Credit: 1 course.

Lectures and laboratory. *Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Professor Bost.

164. CHEMISTRY OF DYESTUFFS. Prerequisite, Chemistry 61, 62. Credit: 1 course.

Lectures and laboratory. (1935-1936 and alternate years.) *Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Professors Wheeler, Bost.

165. ADVANCED TOPICS IN ORGANIC CHEMISTRY. Prerequisite, Chemistry 61, 62. Credit: 1 course.

Lectures and laboratory. (1934-1935 and alternate years.) *Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Professors Wheeler, Bost.

167, 168. ADVANCED ORGANIC PREPARATIONS. Prerequisite, Chemistry 61, 62. Credit: ½ course each quarter.

Laboratory course. *Six laboratory hours a week, any two quarters. Laboratory fee, $10.00 a quarter.* Professors Wheeler, Bost.

169. QUANTITATIVE ORGANIC ANALYSIS. Prerequisite, Chemistry 163. Credit: ½ course.

Quantitative determination of carbon, hydrogen, nitrogen, halogens, sulphur, and a few other elements by well established methods. *Six laboratory hours a week, winter or spring quarter. Laboratory fee, $7.00.* Professors Wheeler, Bost.

183. ADVANCED PHYSICAL CHEMISTRY. Prerequisite, Chemistry 81, 82. Credit: 1 course.

Lectures and textbooks. *Five hours a week, fall quarter.* Professor Crockford.

184. ELECTROCHEMISTRY. Prerequisite, Chemistry 81, 82. Credit: 1 course.

Lectures and textbooks. *Five hours a week, winter quarter.* Professor Crockford.

185. ELECTROCHEMISTRY. Prerequisite, Chemistry 184. Credit: ½ course.

Laboratory course in Electrochemistry to follow the lecture course, Chemistry 184. *Six laboratory hours a week, spring quarter. Laboratory fee, $7.00.* Professor Crockford.

191, 192. CHEMICAL TECHNOLOGY. Prerequisite, Chemistry 61, 62, 91, 92. Credit: 1 course each quarter.

The methods and economics of the chemical industries; lectures and laboratory work. *Three lecture and six laboratory hours a week, fall and winter quarters. Laboratory fee, $10.00 a quarter.* Professor Cameron; Mr. Clifford.

Courses in Chemical Engineering

91. INTRODUCTORY CHEMICAL ENGINEERING. Credit: 1 course.
A survey course covering materials used in the construction of chemical equipment, search of literature, elementary calculations, etc. In the laboratory the students assist the seniors in carrying out studies of the unit operations. *Three lecture and six laboratory hours a week, spring quarter.* Professor White; Mr. Brenner.

94. METALLURGY AND METALLOGRAPHY. Credit: 1 course.
A study of the microscopic structure of ferrous and non-ferrous alloys and the effects of composition, heat treatment, and mechanical work upon these structures and the physical properties of these ferrous alloys. A portion of the course is devoted to laboratory study. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $7.00.* Professor White.

191. CHEMICAL ENGINEERING LABORATORY. Prerequisite, Chemical Engineering 194, 195, 196. Credit: 1 course.
Efficiency studies on chemical equipment, plant erection studies, and unit process work in the laboratory. *Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Professor White, Mr. Brenner.

194, 195, 196. PRINCIPLES OF CHEMICAL ENGINEERING. Prerequisite, Ch.E. 91. Credit: 1½ courses.
A study of the unit operations of chemical engineering, covering fluid flow, heat flow, and filtration, evaporation, distillation, etc. *Three hours a week, fall, winter, and spring quarters.* Professor White.

197. CHEMICAL ENGINEERING CALCULATIONS. Credit: 1 course.
A study of material and heat balances in industrial processes. *Five hours a week, fall quarter.* Professor White.

Courses Primarily for Graduates

Seminar Courses. Library work and lectures.

241, 242, 243. ANALYTICAL CHEMISTRY. Prerequisite, Chemistry 41, 42. Credit: 1½ courses.
Fall, winter, and spring quarters. Professor Dobbins.

251, 252, 253. INORGANIC CHEMISTRY. Credit: 1½ courses.
Fall, winter, and spring quarters. Professor Edmister.

261, 262, 263. THEORIES OF ORGANIC CHEMISTRY, ORGANIC REACTIONS, SPECIAL TOPICS. Prerequisite, Chemistry 163, 164. Credit: 1½ courses.
Fall, winter, and spring quarters. Professors Wheeler, Bost.

281, 282, 283. THERMODYNAMICS. Credit: 1½ courses.
Fall, winter, and spring quarters. Professor Bell.

286. ELECTROCHEMISTRY: THEORY OF SOLUTIONS. Prerequisite, Chemistry 184. Credit: ½ course.
Spring quarter. Professor Crockford.

287, 288, 289. HETEROGENEOUS EQUILIBRIA, PHASE RULE, FILM AND COLLOIDAL PHENOMENA. Credit: 1½ courses.
Fall, winter, and spring quarters. Professor Cameron.

291, 292, 293. INDUSTRIAL CHEMISTRY. Prerequisite, Chemistry 191, 192. Credit: 1½ courses.
Fall, winter, and spring quarters. Professors Cameron, White.

Ch.E. 291, 292, 293. CHEMICAL ENGINEERING. Prerequisite, Ch.E. 194, 195, 196. Credit: 1½ courses.

Fall, winter, and spring quarters. Professor White.

Research Courses.

These courses are intended for applicants for advanced degrees. Laboratory work with frequent conferences with the professor and reference to the literature relating to the subject of research. The subject of research must be assigned or approved by the professor. A student may spend a part or all of his time in research. *Laboratory fee, $10.00 a course.*

341. ANALYTICAL CHEMISTRY.
Professor Dobbins.

351. INORGANIC CHEMISTRY.
Professor Edmister.

361. ORGANIC CHEMISTRY.
Professors Wheeler, Bost.

381. PHYSICAL CHEMISTRY.
Professors Bell, Cameron, Crockford.

391. INDUSTRIAL CHEMISTRY.
Professors Cameron, White.

Ch.E. 391. CHEMICAL ENGINEERING.
Professor White.

DEPARTMENT OF CLASSICAL LANGUAGES AND LITERATURES

Professors HOWE, BERNARD, HARRER, HARLAND; Associate Professor SANDERS; Instructor ELLIOTT; Teaching Fellow SUSKIN.

GREEK

Courses for Undergraduates

1-2. GREEK FOR BEGINNERS. Credit: 2 units or 2 courses.

A double course for students who have had no opportunity to study Greek. This double course may be counted for credit toward the A.B. degree provided it is followed by Greek 13, 14, 21. It may be counted for credit as an elective by students who have selected for their language requirement two other foreign languages. *Five hours a week, fall and winter, or winter and spring quarters.* Professor Bernard; Mr. Elliot.

13. INTERMEDIATE GREEK: HOMER. Prerequisite, Greek 1-2 or equivalent. Credit: 1 course.

Homer's Iliad, selections. *Five hours a week, fall quarter.* Professors Bernard, Harland.

14. INTERMEDIATE GREEK: GREEK PROSE. Prerequisite, Greek 13. Credit: 1 course.

A course continuing the purpose of Greek 1-2, to increase the student's proficiency in reading the language while at the same time leading him into the best literature. *Five hours a week, winter quarter.* Professors Bernard, Harland.

21. PLATO. Prerequisite, Greek 13, 14. Credit: 1 course.

Apology and Crito with selections from the other Socratic dialogues. The course is designed for a more critical study of Greek prose and the thought movements which culminated in the Socratic teaching. *Five hours a week, spring quarter.* Professor Bernard.

53. INTRODUCTION TO GREEK DRAMA. Prerequisite, Greek 13, 14. Credit: 1 course.

One tragedy and one comedy will be studied. This course may be substituted, with the approval of the Professor of Greek, for course 21. *Five hours a week, one quarter, on application.* Professor Bernard or Professor Harland.

58. THE GREEK NEW TESTAMENT. Prerequisite, Greek 13, 14. Credit: 1 course.

St. Mark's Gospel, with selections from other parts of the New Testament. This course is designed for students who wish a more intimate knowledge of the Bible in its original language and especially for divinity and Y. M. C. A. students. With the approval of the Professor of Greek it may be substituted for course 21. *Five hours a week, one quarter, on application.* Professor Bernard.

71. GREEK HISTORY. Prerequisite, Greek 13, 14, 21 or equivalent. Credit: 1 course.

Selections from the Greek Historians, chiefly Herodotus, will be read and reports will be made on related topics in Greek History. *Five hours a week, fall quarter, on application.* Professor Harland.

81. THE GREEK ORATORS. Credit: 1 course.

Select orations from Lysias and Demosthenes. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Bernard or Professor Harland.

Courses for Graduates and Advanced Undergraduates

112. HOMER: ADVANCED COURSE. Prerequisite, Greek 13. Credit: 1 course.

Rapid reading of the Odyssey with Homeric Study. *Five hours a week, one quarter, on application.* Professor Harland or Professor Bernard.

153-154. GREEK DRAMA: ADVANCED COURSE. Prerequisite, Greek 53. Credit: 2 courses.

An extended reading and study of the Greek drama, with lectures on the origin, history, and structure of the drama. *Five hours a week, two quarters, on application.* Professor Bernard.

158. THE GREEK NEW TESTAMENT. Prerequisite, Greek 58. Credit: 1 course.

The Acts of the Apostles: study of grammar and diction and comparison with English versions; the Gospels, with selections from the Epistles; the principles of textual criticism, sources and history of the Greek text and the versions. *Five hours a week, one quarter, on application.* Professor Bernard.

171. GREEK HISTORY. Prerequisite, Greek 71. Credit: 1 course.

Selections from Thucydides will be read and the history of Athens and Sparta will be reviewed with a view to explaining the underlying causes of the Peloponnesian War. *Five hours a week, winter quarter, on application.* Professor Harland.

Courses Primarily for Graduates

201-202-203. SYNTAX OF THE GREEK LANGUAGE FROM HOMER TO THE NEW TESTAMENT. Credit: 3 courses.

Facility in reading the literature in the Greek dialects, Ionic, Attic, Alexandrian, and German is requisite. *Five hours a week, three quarters, on application.* Professor Bernard.

301-302-303. GREEK SEMINAR. Credit: 3 courses.

This course is devoted to the study in detail of particular authors or periods in Greek literature, the subject matter varying from year to year.

It calls for wide reading in the Greek authors selected and in the critical literature concerning them, with oral and written reports. Lectures and conferences. Professors Bernard, Harland, Sanders.

(For additional courses see under Courses Requiring no Knowledge of the Greek or the Latin Languages, pages 92-93, and under General and Comparative Literature, pages 120-121. Attention is called also to courses in Comparative Philology offered by the Department of German. See page 127.)

LATIN

Courses for Undergraduates

1. SELECTIONS FROM CICERO'S ORATIONS. Credit: 1 course.

Review of grammatical principles, vocabulary, prepared and sight translation. This course is designed for those students who present two units only in Latin for entrance, and will count for credit provided it is followed by courses 2 and 15. *Five hours a week, every quarter.* Professor Sanders (Chairman).

2. SELECTIONS FROM VERGIL'S ÆNEID. Prerequisite, Latin 1 or the equivalent. Credit: 1 course.

A continuation of Latin 1: translation, hexameter, content of the Æneid, epic form. Students who present three units only in Latin for entrance begin with this course, and may count it for credit provided it is followed by Latin 15. *Five hours a week, every quarter.* Professor Howe (Chairman).

15 (12). LATIN PROSE. Prerequisite, Latin 1, 2, or the equivalent. Credit: 1 course.

The course is concerned with the translating of selections from the works of Roman historians, biographers, and essayists; but emphasis is placed on the literary values also of the works read, and on the political and social conditions of the periods. Students who present 4 units of Latin for entrance begin with this course and may count it for credit provided it is followed by Latin 16. *Five hours a week, every quarter.* Professor Harrer (Chairman).

16 (11). LATIN POETRY. Prerequisite, Latin 1-2, 15 or the equivalent. Credit: 1 course.

This course comprises the reading of selections from the leading poets of the Classical Period. Emphasis is put on content and literary form. *Five hours a week, every quarter.* Professor Harrer (Chairman).

22. ROMAN LAW. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

The course is a Sophomore option of A.B.-LL.B. students, and is open to other students who have satisfied the prerequisite.

The course deals with the general principles and the historical development of Roman law. The work consists of the translation of selected passages in the legal literature, readings, and lectures. *Five hours a week, winter quarter.* Professor Harrer.

51. ROMAN SATIRE. Prerequisite, Latin 1, 2, 15. 1 course.

Readings from Horace, Petronius, Persius, Juvenal; occasional lectures. This course alternates with course 52. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Sanders.

52. CICERO'S LETTERS. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

The reading of selected letters and discussions of the history and politics of the time. This course alternates with course 51. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Sanders.

71. COURSE FOR TEACHERS. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

The course is concerned with pronunciation, forms, syntax, prosody, the art of translating, methods of instruction. *Five hours a week, fall quarter.* Professor Howe.

Courses for Graduates and Advanced Undergraduates

101. ROMAN HISTORICAL LITERATURE. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

A study of the structure, purposes, and methods of the most significant works. Translation and reading in English from the literature, reports, lectures. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Harrer.

102. ROMAN DRAMATIC LITERATURE. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

A study of the development of Latin comedy and tragedy. Reading of selected plays. The course alternates with course 101. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Harrer.

103. PROSE WRITINGS OF THE REPUBLIC. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

An account of the development of prose literature from Cato to Cicero, with special studies of certain types and readings from the chief works. *Five hours a week, winter quarter.* Professor Sanders.

104. CICERO: POLITICAL CAREER AND WORKS. Prerequisite, Latin 1, 2, 15. Credit: 1 course.

A study of Cicero, as statesman and advocate. Selected letters, as well as a number of orations, will be read. *Five hours a week, spring quarter.* Professor Harrer.

Courses Primarily for Graduates

202. LATIN EPIGRAPHY. Credit: 1 course.

The aim of the course is to acquire facility in the deciphering and translating of inscriptions, and to study in detail a selection of significant inscriptions and their values in the field of Roman studies. *Five hours a week, fall quarter.* Professor Harrer.

203. LATIN PALEOGRAPHY. Credit: 1 course.

The aim of the course is a study of the more important scripts, practice in decipherment, and the methods of textual criticism. *Five hours a week, one quarter, on application.* Professor Harrer.

301, 302, 303. LATIN SEMINAR. Credit: 1 course each quarter.

The course in each quarter is devoted to the study in detail of a particular author or period in Roman literature, the choice of subject being determined, as far as possible, by the needs of the group. Typical subjects of recent years have been: Catullus, Cicero, Vergil, Horace, The Elegists, The Augustan Age, Suetonius, Tacitus, Post-Augustan Prose, Post-Augustan Poetry, etc. *Five hours a week, fall, winter, and spring quarters.* Professors Howe, Harrer.

310. THESIS COURSE. Credit: 1 course.

This course is conducted by conferences as arranged with individual students. *Every quarter.* Professors Howe, Harrer.

(For additional courses see below under Courses Requiring no Knowledge of the Greek or the Latin Language and Courses in General and Comparative Literature, pages 92-93, 120-121. Attention is called also to courses in Comparative Philology offered by the Department of German. See page 127.)

Courses Requiring no Knowledge of the Greek or Latin Language

The following courses in classical literature and civilization are especially designed to supply the necessary foundation for those who, without a reading knowledge of the ancient languages, wish a broader culture, or plan to specialize in modern literature, history, art, etc. When properly approved, they will be allowed to count as part of the major requirement in other departments. They may be taken also to satisfy the requirement of a minor in literature. (See also under General and Comparative Literature, pages 92-93.)

Courses for Undergraduates

61. GREEK LITERATURE. Credit: 1 course.
A study of the masterpieces of Greek literature in English translation, with special reference to the contribution of Greece to modern thought. *Five hours a week, fall quarter.* Professor Bernard.

62. LATIN LITERATURE. Credit: 1 course.
A study of the masterpieces of Latin literature in English translation, with special reference to the contribution of Roman civilization to modern thought. *Five hours a week, winter quarter.* Professor Howe.

75 (71). GREEK CIVILIZATION. Credit: 1 course.
The achievement of the ancient Greeks and their contributions to the modern world in art, architecture, medicine, science, politics, and other fields will be studied. For a background, their house, dress, education, games, theatre, religion, etc. will be considered. Illustrated lectures and discussions. *Five hours a week, on application.* Professor Harland.

76. ROMAN CIVILIZATION. Credit: 1 course.
The course deals with the public institutions, the political and social conditions, and the private life of the Romans, their buildings, living conditions, amusements, manners and customs, and religion. *Five hours a week, spring quarter.* Professor Harrer.

91, 92. GENERAL ARCHÆOLOGY. Credit: 1 course each quarter.
An introductory course in which the art and architecture of Egypt, Mesopotamia, Greece, and Rome will be studied. Illustrated lectures on the monuments will be supplemented by lectures on the history and civilization of the various peoples. Discussions and required reading. *Five hours a week, fall and winter quarters.* Professor Harland.

93. GREEK ARCHÆOLOGY. Credit: 1 course.
This course will deal with the architecture, sculpture, painting, and vases of Greece. The historical development of the art of Greece will be studied, and Greek art will be presented as one phase of the civilization of the ancient Hellenes. *Five hours a week, spring quarter.* Professor Harland.

Courses for Graduates and Advanced Undergraduates

111. THE LATIN EPIC. Credit: 1 course.
The history of the Latin Epic; detailed study of the *Æneid. Five hours a week, spring quarter.* Professor Howe.

112. THE POETRY OF OVID. Credit: 1 course.
The reading in English of the complete works of Ovid; special critical studies in the *Metamorphoses.* The influence of Ovid on later writers. *Five hours a week, fall quarter.* Professor Howe.

113. THE GREEK EPIC. Credit: 1 course.
Epic as a literary form; the Iliad and Odyssey; origins, the Mycenaean civilization, literary characteristics, comparison of the chief English translations, comparison with Norse, Latin, Italian, and English epic. *Five hours a week, winter quarter.* Professor Bernard.

155. GREEK DRAMATIC LITERATURE. Credit: 1 course.
A course designed to embrace the origin, development, technique, and content of Greek drama, with emphasis on tragedy. An interpretation of Greek life and thought as contributing to world progress. *Five hours a week, winter quarter.* (Given in alternate years; not given in 1934-1935.) Professor Bernard.

197. GREEK AND ROMAN ART. Credit: 1 course.
A course which aims to set forth the universal æsthetic principles as illustrated in the masterpieces of Greek and Roman art, with discussions of the æsthetic theories of the classical writers. *Five hours a week, one quarter, on application.* Professor Bernard.

DEPARTMENT OF ECONOMICS AND COMMERCE

Professors Carroll, Murchison, Peacock, Zimmerman, Hobbs, Woosley, Spruill, Schwenning, *Heer; Associate Professors Taylor, Lear, Heath, Wolf, Ferger; Assistant Professors Evans, Sherrill; Acting-Assistant Professor Macon; Instructors Winslow, Arnold; Teaching Fellows Donovan, McNairy; Assistants Barnes, Barnett, Curl, Holmes, Lowder.

ECONOMICS

Courses for Undergraduates

9. THE PHYSICAL BASIS OF MODERN ECONOMIC SOCIETY. Credit: 1 course.
A study of the relationships between modern economic society and physical environment. Three major topics are studied: a. Man's physical environment—topography, location, climate, soils, minerals, and vegetable and animal life. b. Physical factors influencing the existence and location of principal manufacturing industries and agricultural crops. c. An economic appraisal of the natural resources of leading industrial and agricultural nations of the world—United States, British Empire, Germany, France, U. S. S. R., Japan, Argentina, China. *Four lecture and two laboratory hours a week, every quarter. Laboratory fee, $3.50.* Mr. Arnold; Mr. Barnes.

11. RESOURCES AND INDUSTRIES. Prerequisite (in case of Commerce students), Economics 9. Credit: 1 course.
This course occupies a middle ground between geography and economics. Important data of human economic geography are appraised as to their meaning to the economist. The emphasis in resource analysis, therefore, is on the supply and demand conditions which have a measurable effect on price behavior. The close relationship between geographical facts and institutional developments is taken into consideration. The approach is functional rather than descriptive. Attention is focused on wide vistas and deep perspectives rather than on details of technology. In general, an effort is made to place the discussion on a broad basis of human values and world relationships. *Four lecture and two laboratory hours a week, every quarter. Laboratory fee, $3.00.* Professor Zimmerman; Mr. Barnett.

31-32. GENERAL ECONOMICS. Not open to Freshmen. Credit: 2 courses.
This course is planned to give a general understanding of the organization of our economic life and the fundamental principles underlying it. An analysis is made of production, distribution, and consumption, of the elements which determine value and price, with a brief introduction to money, banking and

* Absent on leave, 1933-1934.

credit, monopoly, business combinations, transportation, labor problems, and economic reform. *Five hours a week, fall and winter or winter and spring quarters.* Professors Carroll, Woosley, Spruill, Lear, Wolf, Ferger, Heath; Mr. Winslow.

35. ECONOMIC HISTORY. Not open to Freshmen. Credit: 1 course.

A survey of the steps by which economic activities have evolved from primitive beginnings into the complicated capitalistic economy of today. Special emphasis on the development of the wage system, the Industrial Revolution, the expansion of markets, the ebb and flow of industrial activities, the relation of industrial development to political policy, as they have manifested themselves in England and in the United States. *Five hours a week, every quarter.* Professor Spruill.

71. ECONOMIC STATISTICS. Credit: 1 course.

This course is designed to give a critical understanding of the more important processes of elementary statistical technique used by economists and business men, and found in current discussions of economic matters. Among the topics included are graphic presentation, averages, index numbers, the cyclical analysis of time series, and simple correlation. The laboratory work is designed to give practice in the use of the processes studied, together with an interpretation of the results found. *Three lecture and four laboratory hours a week, every quarter. Laboratory fee, $2.00.* Professor Ferger.

81-82. PRINCIPLES OF MONEY AND BANKING. Prerequisite, Economics 31-32. Credit: 2 courses.

A general study of the principles, functions, and forms of money and credit, followed by analyses of current money and credit problems. The second half of the course is devoted to a study of the theory of commercial banking with particular respect to its application and development in the United States. *Five hours a week, fall and winter or winter and spring quarters.* Professors Murchison, Woosley.

Courses for Graduates and Advanced Undergraduates

111. ADVANCED COMMODITY ECONOMICS. Prerequisite, Economics 11, 31-32. Credit: 1 course.

In this course the demand and supply conditions of a few commodities selected to represent types are studied. The institutional factors affecting these conditions are critically examined with particular reference to price behavior. (Alternates with Commerce 145 and will be given in 1934-1935.) *Five hours a week, spring quarter.* Professor Zimmerman.

121. RISK AND RISK-BEARING. Prerequisite, Economics 31-32. Credit: 1 course.

A study of the risk element in modern industry together with the measures which have been devised to meet it. This course should precede the study of insurance. *Five hours a week, fall quarter.* Professor Lear.

124. PRINCIPLES OF MARKETING. Prerequisite, Economics 31-32. Credit: 1 course.

A critical study of marketing organization and operation. Among the topics discussed are: methods of approach to the study of marketing; the marketing of farm products; the marketing functions; trade channels; direct marketing; the services performed by brokers, sales agents, auctions, wholesalers, and different types of retailers; commodity exchanges and future trading; price policies; price maintenance; brand policies; market research; problems relating to marketing costs; and scientific marketing management. Emphasis is placed on recent developments in retailing such as the growth in economic importance of centrally owned chain store organizations and

coöperative chains. In the study of the marketing of farm products special attention is given to coöperative marketing and the work of the Federal Farm Board is examined critically. *Five hours a week, fall quarter.* Professor Taylor.

131. ECONOMIC THEORY. Prerequisite, Economics 31-32. Credit: 1 course.

The primary purpose of this course is the development of greater facility upon the part of the student in the use of economic theory as a tool in the solution of economic and business problems. Supplementary thereto, the assumptions and limitations of economic theory are analyzed. Specific problems are employed to test the utility of theory as a framework of thought for their solution. Required of all seniors in the School of Commerce and in all majors in Economics. *Five hours a week, fall and winter quarters.* Professor Evans.

141. PUBLIC FINANCE. Prerequisite, Economics 31-32. Credit: 1 course.

A general study of government business covering the principles involved in public revenues and expenditures—local, state, and national; a treatment of the just distribution of public charges and their incidence; and a study of the growth and organization of modern tax systems. *Five hours a week, fall quarter.* Professor Macon.

142. FINANCIAL ORGANIZATION AND ADMINISTRATION. Prererequisite, Economics 141. Credit: 1 course.

The first part of the course deals with contemporary types of state and local financial organization. The relative advantages of centralized as contrasted with decentralized types are discussed. The second part of the course deals with financial methods and procedure. The topics covered include budgets and budget making, budgeting and auditing control, treasury management, debt administration, assessment procedure, purchasing, and state administrative control over local finances. *Five hours a week, winter quarter.* Professor Macon.

143. PROBLEMS IN PUBLIC FINANCE. Prrequisite, Economics 141. Credit: 1 course.

An advanced critical study of certain present problems in government finance. *Five hours a week, spring quarter.* Professor Macon.

144. THEORIES AND FORMS OF BUSINESS ENTERPRISE. Prerequisite, Economics 31-32. Credit: 1 course.

This course deals primarily with the combination movement. But it will treat this problem in its widest aspects: the historical background and the evolution of modern business forms, the theory of business enterprise, the structure and functions of organization, the relation of these questions to social welfare. Pools, trade associations, mergers, trusts, bankers' control, price control, are some of the principal questions which will be considered. *Five hours a week, winter quarter.* Professor Heath.

151. TRANSPORTATION. Prerequisite, Economics 31-32. Credit: 1 course.

A general study, from the historical and critical points of view, of railway transportation in such representative countries as Great Britian, France, Italy, Germany, and the United States; wih some consideration of passenger and freight traffic and rates, and the State's relation to railways. *Five hours a week, fall quarter.* Professor Heath.

161. THEORY OF INTERNATIONAL TRADE. Prerequisite, Economics 31-32. Credit: 1 course.

In this course international trade is viewed from the standpoint of the political economist, emphasizing the social aspects. After an historical study of the past and a critical analysis of the present foreign commerce of the

United States and principal competitors, an effort is made to apply to a survey of our foreign markets and of our foreign sources of supply the general principles of economic theory in so far as they pertain to international trade. Following this the payment balances of this country and of other leading countries engaged in world commerce are critically studied. Finally, the most important theories of international trade are reviewed in the light of historical development. *Five hours a week, fall quarter.* Professor Zimmerman.

165. COMMERCIAL POLICY OF MODERN NATIONS. Prerequisite, Economics 161. Credit: 1 course.

After a general survey of international commercial policy up to the close of the Napoleonic Wars, a more detailed comparative study of the commercial policy of the leading nations during the last hundred years is made. The following countries are included: United States, Great Britian, France, Germany, Russia, Italy, Canada, Argentina, and India. Special attention is given to traffic problems, colonial policies, and to imperalism. The present world resources situation and its probable effect on future commercial policy is appraised. (Alternates with Commerce 169; will be given 1933-1934.) *Five hours a week, winter quarter.* Professor Zimmerman.

171. ADVANCED ECONOMIC STATISTICS. Prerequisite, Economics 71 or its equivalent. Credit: 1 course.

This course is designed to give the student the ability to use some of the more exact and more technical tools of statistical method than can be considered in the elementary course, such as curvilinear trends for time series, changing seasonal variation, and multiple correlation. Acquaintance with practical work and the current literature in statistics is sought through required reading and class reports on recent statistical studies. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $1.00.* Professor Ferger.

182. TYPES OF BANKING. Prerequisite, Economics 81-82. Credit: 1 course.

A comparative study of specialized types of banking institutions—their organization, methods, functions, and relationship to the financial organization of society in general. The course will include trust companies, investment banks, commercial paper houses, commercial discount companies, savings banks, and the various classes of agricultural credit banks. (Alternates with Commerce 181 and will be given in 1933-1934.) *Five hours a week, spring quarter.* Professor Murchison.

185. BUSINESS CYCLES. Prerequisite, Economics 31-32 and 81. Credit: 1 course.

A study of the alternating periods of depression and prosperity. The underlying causes of panics and crises. Fluctuations in prices, trade volume, and physical production. *Five hours a week, winter or spring quarter.* Professor Murchison.

191. AN INTRODUCTION TO THE LABOR PROBLEM. Prerequisite, Economics 31-32. Credit: 1 course.

To the extent that the competitive wage system fails (a) to provide for the laborer an adequate basis for a decent living and (b) to draw from him the services he ought to render to industry, there appears to be a "labor problem." The purpose of this course is to make an analytic survey of the modern labor problem in its major aspects, such as unemployment, low wages, industrial accidents and diseases, overstrain and superannuation, and the status of the worker in industrial society. Trade unionism and the labor movement and intervention by the State in behalf of the worker, and social methods of coping with the problems of labor are also surveyed. *Five hours a week, fall or winter quarter.* Professor Wolf.

192. LABOR AND SOCIAL CONTROL. Prerequisite, Economics 191. Credit: 1 course.

An advanced course in social methods of coping with labor problems. These fall roughly into three classes: (a) self-help on the part of the workers, which embraces trade unionism, labor political activity, and consumers' cooperation; (b) employers' policies, such as welfare work and paternalism, profit-sharing, and company unionism; and (c) intervention by public authority, as through labor legislation, conciliation and arbitration, and judicial limitation of private property rights. In so far as possible the various topics will be studied in terms of the Southern labor situation. *Five hours a week, spring quarter.* Professor Wolf.

195. THEORIES OF ECONOMIC REFORM. Prerequisite, Economics 31-32. Credit: 1 course.

A critical analysis of the leading proposals for reform in the present economic system, including Socialism, Bolshevism, Single Tax, and Industrial Democracy. *Five hours a week, fall or spring quarter.* Professor Carroll.

197. GOVERNMENT AND BUSINESS. Prerequisite, Economics 31-32. Credit: 1 course.

This course deals with the control exercised by government over business operations. Emphasis is placed on legal control. Attention in some detail is given to trade regulations, public utilities and the operation of the federal anti-trust laws. The course includes a study of the control of business by the states under their police powers and by the federal government under the interstate commerce and taxing provisions of the federal constitution. Governmental participation in business is treated to a limited extent as is the attitude of government toward labor. *Five hours a week, spring quarter.* Professor Hobbs.

Courses for Graduates

251-252-253. ADVANCED ECONOMIC THEORY. Prerequisite, Economics 31-32. Credit: 3 courses.

A survey of economic theory from the standpoint of the evolution of modern industrial society. The three courses will not only include a review of the works of the leading economic writers, but will also summarize the principal physical, psychic, and social factors that have shaped economic theory and economic institutions. *Five hours a week, fall, winter and spring quarters.* Professor Heath.

271. ECONOMIC STATISTICS. Introductory Course for Graduate Students. Prerequisite, the completion of an economics major, or the equivalent of our S.B. in Commerce. Credit: 1 course.

This course covers the same material as Economics 71, with the addition of a limited number of additional assignments covering certain phases more carefully and fully. *Three lecture and four laboratory hours a week, every quarter. Laboratory fee, $2.00.* Professor Ferger.

301abc. SEMINAR IN ECONOMICS. Prerequisites, Economics 31-32, 81-82. Credit: 1 course with thesis.

A general introduction to methods of advanced study. Some phase of economic activity in harmony with the interests of the members of the seminar is selected for consideration. Methods of work and content receive equal emphasis. *Two hours a week, fall, winter, and spring quarters.* Professor Murchison (Chairman).

324. SEMINAR IN MARKETING. Credit: 1 course each quarter.

This course is available for graduate students who wish to make an intensive study of special topics in marketing or to do original research work. Individual conferences are arranged with the instructor. *Fall, winter, and spring quarters.* Professor Taylor.

341. RESEARCH COURSE IN PUBLIC FINANCE. Credit: 1 course each quarter.

The changing form and distribution of wealth and income together with the expanding conceptions of governmental services make imperative a constant reëxamination of fiscal problems. The scope of operations and the magnitude of revenues and expenditures emphasize the importance of administrative efficiency. Critical studies in this field are carried on under the supervision of the professor in charge. *Fall, winter, and spring quarters.* Professor Heer.

NOTE. Registration for this course must be approved by the professor in charge.

351. ECONOMIC HISTORY AND THEORY. Credit: 1 course each quarter.

This course is a seminar dealing with the relations between economic history and economic theory. Theories of economic history are analyzed with the view of appraising their utility in the realm of general theoretical analysis. Currently used thought tools, or so-called theories, are tested as to their usefulness in the light of historical trends. So far as the materials to be studied are concerned, about equal emphasis will be placed upon historical data and contemporary thought. *Fall, winter, and spring quarters.* Professor Heath.

361. INTERNATIONAL ECONOMIC RELATIONS. Credit: 1 course each quarter.

An increasing share of the economic life of mankind is being lifted out of the sphere of local and national activities, and is being subjected to world-wide influences. This tendency affects not only those business interests of ours directly engaged in foreign trade, but in general reacts upon our political position as a world-power, and materially influences our domestic and economic life.

The aim of this course is to provide graduate students interested in world economics the opportunity of pursuing advanced research along such lines as these: the movement of world prices; international commodity price control; the world food problem; the population question; advancing industrialization and future supply of raw materials; problems of international law affecting economic activities; foreign investments; commercial treaties; colonial policy, etc. *Hours arranged, fall, winter, and spring quarters.* Professor Zimmerman.

NOTE. Registration for this course must be approved by the professor in charge.

371. RESEARCH IN ECONOMIC STATISTICS. Credit: 1 course each quarter.

This course is designed to allow individual study and research by qualified graduate students in specialized fields of economic statistics, such as business cycle statistical analysis, economic forecasting, price index number problems, regional business indices, commodity demand studies, or the statistical work of business establishments. *Hours arranged, fall, winter, and spring quarters.* Professor Ferger.

NOTE. Registration for this course must be approved by the professor in charge.

382. SEMINAR IN PRIVATE FINANCE. Credit: 1 course each quarter.

The scope of this course will depend on the interests and preparation of the student, but an opportunity will be given for a more advanced study of commercial banking, central banking policies, and the forces operating in the

money and capital markets. *Hours arranged, fall, winter, and spring quarters.* Professor Woosley.

NOTE. Registration for this course must be approved by the professor in charge.

385. ECONOMIC DYNAMICS. Credit: 1 course each quarter.

This course focuses upon the changing nature of the modern economic organization. An effort is made to identify the more important of the dynamic elements, and to evaluate the significance of each in the general process of change. Attention is given to the readjustment processes and problems of particular industries, as well as to general trade, finance, and social well-being. Topics covered would include consumption behavior, income distribution, capital accumulation, money and credit conditions, new developments in marketing, production, transportation. The method of study will be inductive. *Hours arranged, fall, winter, and spring quarters.* Professor Murchison.

NOTE. Registration for this course must be approved by the professor in charge.

391. HUMAN RELATIONS IN INDUSTRY. Credit: 1 course each quarter.

This course is a seminar in selected topics in labor economics and aims to provide a limited number of graduate students an opportunity of doing critical and constructive work in this field. In view of the fact that there are grave problems connected with the adjustment of the workers to the new industrial and social order that is being developed in the South Atlantic States, a part of the time is usually devoted to this topic. *Fall, winter, or spring quarter, hours arranged.* Professor Wolf.

NOTE. Registration for this course must be approved by the professor in charge.

399. SEMINAR. Credit: 1 course.

Individual research in a special field under direction of a member of the department.

COMMERCE

*(Courses in Commerce count for credit toward the degree S.B. in Commerce only.)

Courses for Undergraduates

51. BUSINESS ORGANIZATION. Prerequisite, Economics 31-32. Credit: 1 course.

The forms of business organization with emphasis on the corporation. The external relations of a business organization and the internal coördination of the factors in production with a view to the establishment of effective control and definite responsibility for results. Special attention will be directed to the various functions to be performed, such as production, finance, personnel, marketing, risk-taking, and records and standards. *Five hours a week, fall or spring quarter.* Professor Schwenning.

51E-52E-53E. BUSINESS ADMINISTRATION FOR STUDENTS IN ENGINEERING. Open to students in the School of Engineering only. Prerequisite, Economics 31-32. Credit: 1½ course.

The elements of business organization with emphasis on the corporation, its nature, its promotion, its financing, and its operation. Internal organization

* Commerce 51E-52E-53E are offered for students in the School of Engineering only and are open to no others.

Commerce 71P is offered for students in the School of Pharmacy only and is open to no others.

with special reference to methods of control, managerial accounting, cost analysis, financing of current operations, valuation and methods of appraisal, depreciation, sinking funds, and the interpretation of financial statements. The economics of locating and managing industrial plants, the handling of the labor factor through specialized personnel administration, and the relations existing between consumers and producers. *Three hours a week, fall, winter, and spring quarters.* Professor Schwenning.

61. SALES MANAGEMENT. Prerequisite or corequisite, Economics 31-32. Credit: 1 course.

This course presents important problems of sales planning and administration from the point of view of the executive in charge of marketing. Among the general topics considered are: the relation of the sales department to other departments of the business; types of sales organizations; the selection, training, compensation, and management of the sales force; distribution policies including the choice of channels and agencies; sales research and market analysis; the determination of price and brand policies; the statistical control of sales operations; and the costs of distribution. Methods of preparing sales budgets are emphasized and budgets used by representative companies are examined. The distributive organization of several companies is studied critically. In the latter part of the course the problem method of instruction is used. *Five hours a week, spring quarter. Laboratory fee, $1.00.* Professor Taylor.

71. ACCOUNTING: PRINCIPLES. Prerequisite or corequisite, Economics 31-32, Commerce 51. Credit: 1 course.

Lectures with laboratory work. Study of the theory of debit and credit, record making, organization of accounts, and presentation of financial and profit and loss statements. Laboratory exercises in accounting problems and technique. *Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Professors Peacock, Sherrill; Mr. Holmes.

71P. ACCOUNTING PRINCIPLES FOR STUDENTS IN THE SCHOOL OF PHARMACY. Open to students in the School of Pharmacy only. Prerequisite, Economics 31-32. Credit: 1 course.

A study of the fundamentals of double entry bookkeeping, covering the theory of debit and credit, closing the books, and construction of financial statements. Emphasis will be on systems suitable for drug stores. *Four lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Professor Sherrill; Mr. Holmes.

72. ACCOUNTING PRINCIPLES. Prerequisite, Commerce 71. Credit: 1 course.

Lectures with laboratory work. An approach to accounting problems from the business manager's point of view. It consists of a thorough study of the organization of the accounting department of a business and its relation to the other departments, accounting systems, construction and analysis of accounting statements. The principles of valuation of assets, depreciation, and bonds are also covered. *Four lecture and four laboratory hours a week, every quarter. Laboratory fee, $3.00.* Professors Peacock, Sherrill; Mr. Curl.

91-92. BUSINESS LAW. Prerequisite, Economics 31-32. Credit: 2 courses.

The aim of the course is to give the student an understanding of the main principles of law which govern in the daily conduct of business. The topics discussed are: contracts, agencies, negotiable instruments, sales, bailments, corporations, partnerships, and bankruptcy. *Five hours a week, fall and winter quarters.* Professor Hobbs.

Courses for Graduates and Advanced Undergraduates

121. INSURANCE: LIFE. Prerequisite, Economics 31-32. Credit: 1 course.

A study of the principles and technique of life insurance, including disability, accident, and group insurance. Some attention will also be given to the investment operations of insurance companies. *Five hours a week, winter quarter.* Professor Lear.

122. INSURANCE: FIRE, MARINE, BOND, AND TITLE. Prerequisite, Economics 31-32. Credit: 1 course.

In this course, an effort is made to consider as far as possible the wide range which the insurance function covers and the probable trend of its future development. The topics noted in the title of the course are studied and as many others as time will permit. *Five hours a week, spring quarter.* Professor Lear.

141. TRAFFIC PROBLEMS. Prerequisite, Economics 151. Credit: ½ course.

A study of current technical problems in the field of transportation and traffic management. (This course will be given only in case as many as five students register for it.) *Three hours a week, winter quarter.* Professor Heath.

145. OCEAN SHIPPING. Prerequisite, Economics 31-32. Credit: ½ course.

A study of the elements of water transportation, trade routes, ports and terminal facilities, vessel types, ship operation and management, ocean freight service and rates, marine insurance. The problem of our merchant marine and national policies affecting it are also discussed. (Alternates with Economics 111 and will be given in 1933-1934.) *Three hours a week, spring quarter.* Professor Zimmerman.

151. PRINCIPLES OF INDUSTRIAL MANAGEMENT. Prerequisite, Economics 31-32, Commerce 51. Credit: 1 course.

This course covers the problems involved in the construction, equipment, and administration of a manufacturing enterprise. The unit of study is the factory. The subject matter is treated under four heads: the underlying principles of production, the agencies of production, the control of production operations, and the establishment of production standards. *Five hours a week, winter quarter.* Professor Schwenning.

154. INDUSTRIAL MANAGEMENT: THEORIES AND PRACTICES. Prerequisite, Economics 31-32, Commerce 51. Open only to selected seniors and graduate students. Credit: ½ course.

A critical examination of the economic, social, and ethical aspects of modern business administration. Current theories of organization and management will be taken up and subjected to careful scientific analysis. Practices will be compared with theories. An attempt will be made to formulate the underlying principles upon which the administration of modern industrial enterprise rests. *Three hours a week, winter quarter.* Professor Schwenning.

155. PERSONNEL MANAGEMENT. Prerequisite, Economics 31-32, Commerce 51. Credit: 1 course.

A scientific study of the methods of hiring and handling personnel in the various lines of industry. The supply, selection, training, promotion, transfer, and discharge of employees; the computation and significance of labor turnover; housing, educational and recreational facilities; the functions of a personnel department with reference to efficiency, and the maintenance of good will between employees and employers. *Five hours a week, spring quarter.* Professor Schwenning.

157. TIME AND MOTION STUDY. Prerequisite, Economics 31-32; Commerce 51-151, or Commerce 51-52-53E. Open only to seniors and graduate students. Credit: ½ course.

A presentation of the elements of time and motion study as a phase of scientific management and as a device used by modern industrial establishments to measure the productive capacity of workers on specific jobs and to set production standards. The course will include a discussion of the following: fundamentals and development of time and motion study; equipment and qualifications of a time study man; collection and tabulation of data; organization of the time study department, etc. Students will be given practice in making times studies and in applying the results. (Alternates with Commerce 154). *Three hours a week, winter quarter.* Professor Schwenning.

161. ADVERTISING. Prerequisite, Economics 31-32. Credit: 1 course.

A study of the economics of advertising, the place and function of advertising in business, and the psychological principles applicable to the preparation of advertisements. The chief problems of advertising are discussed from the viewpoint of the executive in charge of marketing who must continually give consideration to what can reasonably be expected from advertising as part of a complete distribution program. Emphasis throughout the course is placed on the ethical aspects of advertising and on the use of research methods in the effectivea planning and preparation of advertising campaigns. Several outstanding campaigns are studied in detail. Considerable practice is given students in the planning and preparation of advertisements. *Five hours a week, fall or spring quarte. Laboratory fee, $1.00.* Professor Taylor.

163. ADVANCED COURSE IN MARKETING. Prerequisite, Economics 124 or Commerce 61 or 161. Credit: 1 course.

This course is for students who wish to do advanced work in the field of marketing. The particular problems considered vary from year to year depending on the interests of the class. The seminar method is used.

Five hours a week, spring quarter. Professor Taylor.

165. RETAIL DISTRIBUTION. Prerequisite, Economics 31-32. Credit: 1 course.

A critical study is made of the general policies and practices of retail institutions such as unit stores, department stores, specialty stores, chain stores, voluntary chains, and mail order houses; and an attempt is made to develop the principles of retail distribution. Among the general topics considered are: elements of retail profit, types of retail institutions and types of merchandise, store location, store layout and merchandise classification, sales and service policies, merchandising, pricing policies, brand policies, relations with merchandise sources, and organization. Problems and cases form an important part of this course. *Five hours a week, winter quarter.* Professor Taylor.

169. FOREIGN TRADE PRACTICE. Prerequisite, or corequisite, Economics 124. Credit: 1 course.

This course treats of foreign trade as a business profession and serves to prepare for entrance into the field; emphasis throughout is on practical problems.

Part I. The organization of Foreign Trade: export departments; middlemen and their functions; coöperation.

Part II. Methods: direct versus indirect exporting; export campaigns; sales policies.

Part III. Foreign Market Analysis.

Part IV. Paper work and technical procedure in exporting and importing, including foreign trade financing. (Alternates with Economics 165, will be given 1934-1935.) *Five hours a week, winter quarter.* Professor Zimmerman.

171. ADVANCED ACCOUNTING. Prerequisite, Commerce 71-72. Credit: 1 course.

Lectures with laboratory work. Study of accounting problems and forms for special types of business concerns. Accounting for the organization and liquidation of co-partnerships and corporations, for combinations and consolidations, for trustees and receiverships, branch houses, municipalities, and foreign exchange. *Five hours a week, spring quarter. Laboratory fee, $3.00.* Professor Peacock.

172. ACCOUNTING PRACTICE. Prerequisite, Commerce 71 and prerequisite or corequisite, Commerce 72. Credit: 1 course.

A laboratory course. Bookkeeping systems and records for the various industries prevalent in North Carolina are studied and practice sets for each are prepared. A tentative list will include tobacco manufacturing, furniture manufacturing, cotton goods manufacturing, automobile sale agencies and garages, banks in small cities, and municipalities. *Six hours a week, spring quarter. Laboratory fee, $3.00.* Professor Peacock.

173. COST ACCOUNTING. Prerequisite, Commerce 71-72. Credit: 1 course.

Lectures with laboratory work. Methods for collection of data relative to prime costs and a careful analysis of various methods of burden distribution. Application of principles will be made in the laboratory by means of budgets for cost accounting in different classes of enterprise. *Five hours a week, fall quarter. Laboratory fee, $3.00.* Professor Peacock.

175. AUDITING. Prerequisite, Commerce 71-72. Credit: 1 course.

Lectures and problems. Kinds of audits, system of accounts, methods of conducting audits, and problems in auditing. *Five hours a week, winter quarter. Laboratory fee, $3.00.* Professor Peacock.

177. INCOME TAX PROCEDURE. Prerequisite, Commerce 71-72. Credit: 1 course.

This course consists of a thorough study of both the Federal and State income tax laws and the problems that arise in the making of the various returns. The preparation of the tax returns and claims for refund will be undertaken as laboratory exercises. *Five hours a week, winter quarter. Laboratory fee, $2.00.* Professor Sherrill.

178. C. P. A. PROBLEMS. Prerequisite, Commerce 71-72. Credit: ½ course.

This course deals with the questions and problems given by the different states and the American Institute in their C. P. A. examinations. Typical problems are solved, and solutions prepared by leading accountants of the country are studied. (This course will be given only in case as many as five students register for it.) *Three hours a week, spring quarter.* Professor Peacock.

179. GOVERNMENTAL ACCOUNTING. Prerequisite, Commerce 71-72. Credit: 1 course.

Lectures and laboratory work. A study of Budgeting Accounting and its application to the various governmental units; the differences between Fund Accounting and Commercial Accounting; methods of collecting data recorded in books of original entry; and the preparation of Financial Statements. A survey will be made of systems for educational institutions, and for state, county, and city governments. Laboratory work will consist of practical problems. Field trips will be taken in order to study the system used by the State of North Carolina, the system prepared by the County Government Advisory Commission for counties, and other available systems. *Five hours a week, spring quarter. Laboratory fee, $2.50.* Professor Sherrill.

181. BANKING PRACTICE AND FOREIGN EXCHANGE. Prerequisite, Economics 81-82. Credit: 1 course.

Organization and management of a commercial bank. Duties and responsibilities of different departments. Bank accounting. Handling of credit instruments, checks, drafts, acceptances, bills of exchange. Critical examination of present methods and standards. The course will also include a study of international banking operations; the credit instruments used in financing trade between nations; the forces determining rates of exchange. (Alternates with Economics 182 and will be given in 1934-1935.) *Five hours a week, spring quarter.* Professor Murchison.

191. CORPORATION FINANCE. Prerequisite, Economics 31-32, Commerce 51 and 71. Credit: 1 course.

A study of the principles and practice of corporate financing. Among the topics considered are: the methods of raising permanent capital, problems of current financing, the treatment of earnings, and financial problems incident to expansion and reorganization. Specific problems and reports are employed to illustrate and emphasize the principles involved. *Five hours a week, fall or winter quarter.* Professor Woosley.

195. INVESTMENTS. Prerequisite, Economics 31-32, Commerce 71-72, 191. Credit: 1 course.

This course is essentially a laboratory study of corporate securities from the standpoint of the investor. Primary emphasis is placed upon the development of technique and standards of investment analysis. *Five hours a week, spring quarter.* Professor Woosley.

Courses Primarily for Graduates

301abc. SEMINAR IN COMMERCE. Credit: 1 course with thesis.

A general introduction to methods of advanced study. Some phase of business activity in harmony with the interests of the members of the seminar is selected for consideration. Methods of work and content receive about equal emphasis. *Fall, winter, and spring quarters.* Professor Murchison (Chairman).

399. SEMINAR. Credit: 1 course each quarter.

Individual research in a special field under direction of a member of the department.

§DEPARTMENT OF EDUCATION

Professors NOBLE, WALKER, KNIGHT, TRABUE, JORDAN; Associate Professors PRESTON, FARRAR, MUNCH, GIDUZ; Assistant Professors ¶GWYNN, ¶KING, MARKS; Instructor HOLLINGSWORTH; Teaching Fellow HUNTER; *In Extension*: Professors MCKEE, HOWARD; Associate Professor MORRISON; Assistant Professor Beard.

Students who wish to qualify for high school teachers' certificates in the academic branches may satisfy the professional requirements for such certificates (a) by taking the required Education courses as electives or (b) as a minor in the regular College of Arts program, or (c) by selecting Education as a major in which case the student's entire program for the junior and senior years will be directed by the major department.

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§ Only courses given in residence in the academic year 1933-1934 are listed in this catalogue. For other courses offered through the Extension Division and in the Summer School, the reader is referred to the bulletins of those two divisions.

¶ Absent on leave, 1933-1934.

Courses for Undergraduates

31. AN INTRODUCTION TO EDUCATIONAL PSYCHOLOGY. Required of all prospective high school teachers who do not elect Psychology 21-22. Credit: 1 course.

Education is viewed in this course as a series of changes in individual pupils. The elementary principles of educational psychology will be illustrated and studied briefly through assigned readings, experiments, and discussions. *Five hours a week, every quarter.* Professor Jordan, Mr. Hunter.

The following courses, 51P-63, are open only to students completing their work in elementary education.

*51P‡. MATERIALS AND METHODS OF ELEMENTARY EDUCATION—READING AND STUDY HABITS FOR THE PRIMARY GRADES. Required of all prospective primary grade teachers in the School of Education. Credit: 1 course.

A study of the problems in beginning reading, including a critical evaluation of the various methods of teaching reading and of developing effective study habits. *Five hours a week, fall quarter.* Professor Marks.

*52G‡. MATERIALS AND METHODS OF ELEMENTARY EDUCATION—READING AND STUDY HABITS FOR THE GRAMMAR GRADES. Required of all prospective grammer grade teachers in the School of Education. Credit: 1 course.

The aim of this course is to become acquainted with the materials and methods of teaching reading as a means of extending the experiences of boys and girls, of stimulating good thinking, and of arousing interest in a wide variety of reading activities. *Five hours a week, fall quarter.* Professor Marks.

*53X‡. MATERIALS AND METHODS OF ELEMENTARY EDUCATION: (a) THE SOCIAL SCIENCES; (b) THE NATURAL SCIENCES. Required of all prospective elementary grade teachers in the School of Education. Credit: 1 course.

The first half (Part a) is designed to give a thorough survey of recent experiments and special studies in subject matter and methods in geography, history, and citizenship. Suggestions will be given for utilizing daily activities to develop civic virtues. The second half (Part b) deals with natural science and health. The general principles controlling the selection of material and its organization for each grade will be presented. *Five hours a week, winter quarter.* Professor Marks.

*54P‡. MATERIALS AND METHODS OF ELEMENTARY EDUCATION: (a) ARITHMETIC AND NUMBER PROJECTS FOR THE PRIMARY GRADES; (b) LANGUAGE FOR THE PRIMARY GRADES. Credit: 1 course.

The first half (Part a) will emphasize the development of number concept in primary grades. The object of the second half (Part b) is to teach self-expression of oral and written language in life-like situations. *Five hours a week, spring quarter.* Professor Marks.

*55G‡. MATERIALS AND METHODS OF ELEMENTARY EDUCATION: (a) ARITHMETIC FOR THE GRAMMAR GRADES; (b) LANGUAGE AND COMPOSITION FOR THE GRAMMAR GRADES. Credit: 1 course.

The first half (Part a) will give a careful study of the investigations revealing the course of mathematical facts which are necessary for all people

* To be discontinued after the year 1933-34.

‡ NOTE: The letter "P" when used after the number of a course means that the course is intended for teachers of the primary grades, the letter "G," that the course is intended for teachers of the grammar grades, and the letter "X," that the course is intended for teachers of either the primary or the grammar grades.

to acquire, also methods of teaching these facts thoroughly. The second half (Part b) aims to study means of speaking effectively and pleasingly. Written language, obtaining good form through genuine use, including composition, writing, and spelling. *Five hours a week, spring quarter.* Professor Marks.

*56X‡. DIRECTED TEACHING IN THE ELEMENTARY SCHOOL. Credit: 1 course.

The purpose of this course is to provide actual practice in teaching in the elementary grades under supervision. It will include observation of teaching, study of the material taught, and preparation of lesson plans.

*57X‡. DIRECTED TEACHING IN THE ELEMENTARY SCHOOL. (Continuation of 56X.) Credit: 1 course.

The purpose of this course is to provide actual practice in teaching in the elementary grades under supervision. It will include observation of teaching, study of the material taught, and preparation of lesson plans.

*63. CLASSROOM MANAGEMENT. Credit: 1 course.

This course takes up for investigation and discussion the teacher's problems in managing her classroom. It does not deal with instructional problems, which are considered in the courses in materials and methods, nor with the administration of a school, which is considered in other courses. But it does consider specifically the organization and direction of pupils and equipment in a classroom. *Five hours a week, winter quarter.* Professor Marks.

71. EDUCATIONAL PSYCHOLOGY. Prerequisite, Education 31 or Psychology 21-22. Required of all prospective high school teachers. Credit: 1 course.

To consider critically such topics as the original nature of man, heredity versus environment, kinds of learning and factors influencing learning, individual differences, mental hygene, mental measurement is the purpose of this course. Lectures, textbooks, laboratory. *Four lecture and two laboratory hours a week, every quarter.* Professor Jordan.

75. THE THEORY AND PRACTICE OF EDUCATION. Credit: 1 course.

A study of the theory and practice of education from the viewpoint of both the teacher and the citizen; the selection of the material of instruction; the development and arrangement of the curriculum for the grammar schools and the high schools. Lectures, textbooks, and assigned readings. *Five hours a week, winter quarter.* Professor Noble.

The following courses, 82-92, are open to students completing their work in the School of Education only.

82. DIRECTED TEACHING OF HIGH SCHOOL ENGLISH. Prerequisites to be determined by the instructor. Credit: 1 course.

The purpose of this course is to provide actual practice in teaching high school classes in English under supervision. It will include observation of teaching, study of the material taught, and preparation of lesson plans. *Five hours a week, every quarter.* Professor Farrar.

84. DIRECTED TEACHING OF HIGH SCHOOL FRENCH. Prerequisites to be determined by the instructor. Credit: 1 course.

In this course the student carries out as far as possible the plan evolved in Education 183. From passive participation through a period of observation, the student gradually reaches the active stage of teaching. During the latter

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* To be discontinued after the year 1933-1934.

‡ NOTE: The letter "P" when used after the number of a course means that the course is intended for teachers of the primary grades, the letter "G," that the course is intended for teachers of the grammar grades, and the letter "X," that the course is intended for teachers of either the primary or the grammar grades.

half of the term he has sole charge of the class, always of course, under the supervision of the instructor. Daily lesson plans; conferences for the discussion of each day's work. *Five hours a week, every quarter.* Professor Giduz.

86. DIRECTED TEACHING OF THE SOCIAL STUDIES. Prerequisites to be determined by the instructor. Credit: 1 course.

In this course the student will at first attend a high school class in history or community civics and observe the methods and technique of conducting the class. After he has observed and prepared the work of the class long enough to become familiar with its operation he will be required to work out a daily lesson plan for each class observed. When, in the judgment of the instructor, the student is sufficiently familiar with the correct methods of procedure, he will be permitted to conduct the class under the personal supervision of the instructor. After each class conducted by the student teacher his work will be discussed and criticised in conference with the supervisor. *Five hours a week, every quarter.* Mr. Hollingsworth.

88. DIRECTED TEACHING OF HIGH SCHOOL LATIN. Prerequisites to be determined by the instructor. Credit: 1 course.

The teaching of Latin in the practice school will be observed closely by students for a time; later the work of the classes observed will be fully discussed. After such intensive observation work, the students will be required to work out individual daily lesson plans for the classes observed. When the instructor believes that the students have had sufficient time to learn the correct method of procedure, he will turn over a class to each one of them to handle independently under his supervision. Critical reports and discussions of the class work of each student teacher will follow. *Five hours a week, every quarter.* *Mrs. Lawson.

90. DIRECTED TEACHING OF HIGH SCHOOL MATHEMATICS. Prerequisites to be determined by the instructor. Credit: 1 course.

This course familiarizes the student with the actual classroom situation. It consists in the following steps: mastery of subject matter to be taught; preparation for teaching by observation, making lesson plans and conference with the instructor; actual teaching; and discussion with the instructor of techniques used and results obtained. Teaching by the student is the feature of the course. *Five hours a week, every quarter.* Professor Munch.

92. DIRECTED TEACHING OF HIGH SCHOOL SCIENCE. Prerequisites to be determined by the instructor. Credit: 1 course.

The object of this course is to give the student familiarity with the science classroom and laboratory in operation. Entering first as an observer he will gradually be allowed to take over more and more of the work as he is considered qualified to do so. Conferences with the instructor will be an important part of this course. *Five hours a week, every quarter.* Professor Preston.

98. GENERAL METHODS IN SECONDARY EDUCATION. Required of all prospective high school teachers who do not offer Education 99. Prerequisite, Education 71. Credit: 1 course.

The first half of this course deals with the aims of high school teaching and the outcomes of learning. In the second half an evaluation of the various techniques and methods of instruction commonly used in high schools is attempted. The course includes a limited amount of observation in the training school. *Five hours a week, winter quarter.* Professor Walker.

99. PRINCIPLES OF SECONDARY EDUCATION. Required of all prospective high school teachers who do not offer Education 98. Prerequisite, Education 71. Credit: 1 course.

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* Mrs. Lawson is substituting for Professor Gwynn.

A study of the American high school, its evolution, organization, administration, functions, and problems. Special emphasis will be laid on the public high school in North Carolina. This course is designed especially to meet the needs of those students who are looking toward teaching positions and principalships in secondary schools. Textbooks, lectures, assigned readings, and reports. *Five hours a week, fall or spring quarter.* Professor Walker.

Courses for Graduates and Advanced Undergraduates

101. INTRODUCTORY COURSE IN SCHOOL ADMINISTRATION. Credit: 1 course.

This course will consider the most important problems of school administration, especially as these problems bear on the success of the teacher's work. Students without teaching experience, or teachers without a knowledge of administrative problems, should not register for the more specialized courses in the field of administration until after completing this course. Textbooks, observations, and discussions. *Five hours a week, fall quarter.* Professor Trabue.

105. GUIDANCE AND ADMINISTRATION OF PUBLIC SCHOOL PUPILS. Prerequisite, four full courses in education, including one in administration, and two years of successful teaching experience. Credit: 1 course.

This course undertakes not only to acquaint the student with the extensive literature of scientific research in pupil personnel work, but also to develop through actual handling of individual records, reports, and materials as many as possible of the important skills required of the principal in the classification and promotion of pupils, in program making, in organization of pupils activities, in student government, in athletics, etc. *Five hours a week, spring quarter.* Professor Trabue.

108. STATE SCHOOL ORGANIZATION. Credit: 1 course.

Five hours a week, winter quarter. Professor Trabue.

142. HISTORICAL FOUNDATIONS OF MODERN EDUCATION. Credit: 1 course.

This course traces the development of some of the more important educational problems of modern times as they have been affected by the social and political facts of history, by the contributions of the leading educational theorists, and by institutional practice. Textbooks, lectures, investigations, and reports. *Five hours a week, winter quarter.* Professor Knight.

143. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES. (History 170.) Credit: 1 course.

The social and educational institutions and practices of the United States are traced through: (a) the period of transplanting of European institutions; (b) the period of modifications of institutional life to meet new conditions; and (c) the period of development of a social and an educational system of free common schools, high schools, and higher and technical education in harmony with the political and social ideals and institutions of America. Textbook, lectures, investigations, and reports. *Five hours a week, fall quarter.* Professor Knight.

145. COMPARATIVE EDUCATION. Credit: 1 course.

This is a course in comparative education with emphasis upon the modern educational experience of and the more significant educational movements in certain foreign countries. Attention will be given to education as a means of national advancement and to the development of retarded national cultures through education. *Five hours a week, spring quarter.* Professor Knight.

149. HISTORY OF EDUCATION IN NORTH CAROLINA. Credit: 1 course.

The purpose and development of education in North Carolina as seen in the work of public, private, charity, and church schools. A comparative study of public education in North Carolina and other selected typical states of the American Union. Lectures, discussions, and assigned readings. *Five hours a week, fall or spring quarter.* Professor Noble.

160. CURRICULUM CONSTRUCTION. Credit: 1 course.

The construction and organization of the curricula of the elementary and secondary schools when based upon human needs. Includes consideration of the teacher's function in curriculum construction, objectives of the school subjects, sources of curricular material and criteria for evaluating it, selection and organization of the pupil-activities through which the objectives may be attained. *Five hours a week, winter quarter.* Professor Trabue.

163. EVALUATION CLASSROOM INSTRUCTION. Credit: 1 course.

The general and specific objectives of instruction are agreed upon in the early meetings of this course. Criteria are then developed for evaluating the materials, techniques, activities, and outcomes of instruction. The latter part of the course consists in applying the criteria to actual classroom lessons in an attempt to develop skill in observing, evaluating, and improving instruction. *Five hours a week, alternate spring and summer quarters.* Professor Trabue.

164. TESTS AND MEASUREMENTS IN ELEMENTARY EDUCATION. Prerequisite, Education 31 or Psychology 21-22. Credit: 1 course.

Methods of measuring and improving the results of instruction in the elementary school will be given detailed consideration in this course. Students will be made acquainted with the most important tests and scales and will be given some experience in interpreting the results both statistically and practically. *Five hours a week, fall quarter.* Professor Jordan.

171. THE PSYCHOLOGY OF ELEMENTARY EDUCATION. Credit: 1 course.

Five hours a week, spring quarter. Professor Jordan.

173. MENTAL MEASUREMENTS. Prerequisite, Education 31 or Psychology 21-22. Credit: 1 course.

A study of mental tests both individual and group. The origin of the tests will be first considered followed by a comparative study of the various types of group and individual tests. There will be ample opportunity offered for the actual administration of the tests and the interpretation of the results. *Five hours a week,spring quarter.* Professor Jordan.

181. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL ENGLISH. Prerequisites to be determined by the instructor. Credit: 1 course.

This course is designed to give practical preparation for the teaching of English in high schools. It includes consideration of the aims, courses of study, and methods found most effective in the teaching of grammar, composition (oral and written), and the different types of literature to pupils of high school age. Applicants should be thoroughly grounded in the fundamental principles of English grammar, should write and speak well, and should have more than average ability to appreciate literature. *Five hours a week, every quarter.* Professor Farrar.

183. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL FRENCH. Prerequisites to be determined by the instructor. Credit: 1 course.

In this course the student studies the development of modern language teaching. Particular stress is laid on present-day tendencies, more especially in connection with pronunciation, phonetics, reading, "realia," activities, texts, etc. Weekly reports in readings. Term paper. *Five hours a week, every quarter.* Professor Giduz.

185. MATERIALS AND METHODS OF TEACHING THE SOCIAL STUDIES. Prerequisites to be determined by the instructor. Credit: 1 course.

This course is required of all students who are preparing to teach high school history and other social studies. The aims, functions, and objectives of the social studies will be carefully analyzed and the history of their place in the American secondary school examined. Such problems as planning and organizing the course, textbooks, and library equipment, maps, pictures, and other visual aids will be considered. Following these will be a discussion of the various methods problems such as the recitation, teaching pupils how to study, the lecture, textbook, topical problem and source methods, written work, and testing results. Textbooks, lectures, discussions, special investigations, and reports. *Five hours a week, every quarter.* Mr. Hollingsworth.

187. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL LATIN. Prerequisites to be determined by the instructor. Credit: 1 course.

This course is designed primarily for students who plan to teach high school Latin, whether as a major or minor subject. The history of the teaching of Latin will be discussed along with modern tendencies of instruction in this field. A special study will be made of high school Latin texts, and reports and discussions will emphasize the various methods used in teaching them. Helpful bibliographies will be compiled and examined. Not offered 1933-1934. See Latin 71, which in 1933-1934 may be substituted for Education 187. *Five hours a week, winter or spring quarter.* Professor Gwynn.

189. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL MATHEMATICS. Prerequisites to be determined by the instructor. Credit: 1 course.

A course designed to give those preparing to teach mathematics in high school a comprehensive view of that field. It is composed of six units as follows: history of mathematics, objectives of mathematics teaching, materials, methods, the psychology of mathematics teaching, and measuring in the field of mathematics. Reading and reports on these units will be required. *Five hours a week, every quarter.* Professor Munch.

191. MATERIALS AND METHODS OF TEACHING HIGH SCHOOL SCIENCE. Prerequisites to be determined by the instructor. Credit: 1 course.

Knowledge of science content is assumed. This course considers the objectives and curriculum position of secondary school science, the proper teaching viewpoint, instruction techniques, selection and use of equipment. As background, the development of secondary school science in response to changing economic, social, and educational conditions is briefly studied. Assigned readings introduce the important literature. *Five hours a week, every quarter.* Professor Preston.

194. MEASUREMENTS IN SECONDARY EDUCATION. Prerequisite, Education 31 or Psychology 21-22. Credit: 1 course.

Standard tests for measuring the results of secondary school instruction will be examined and discussed. Special attention will be given to the results and needs in North Carolina high schools. Students will be expected to become fairly familiar with the tests and scales and to develop some skill in interpreting results. *Five hours a week, fall quarter.* Professor Jordan.

197. SOCIAL POLICY AND EDUCATION. Credit: 1 course.

Fundamental problems in the social and ethical theory of education. Lectures, prescribed readings, essays, and reports. This course deals with problems of social progress from the standpoint of education, attempts to define a social policy for education, and discusses the vital educational issues involved in that policy. *Five hours a week, winter quarter.* Professor Walker.

Courses Primarily for Graduates

201. PROCEDURES IN EDUCATIONAL RESEARCH. Credit: 1 course. *Five hours a week, fall quarter.* Professor Trabue.

204. EDUCATIONAL FINANCE. Credit: 1 course. *Five hours a week, spring quarter.* Professor Trabue.

271-272. PROBLEMS IN EDUCATIONAL PSYCHOLOGY. Prerequisite, Education 31 or Psychology 21-22, and preferably one other course in Educational Psychology. Credit: 2 courses. (Either part may be taken for one course credit.)

A double course treating intensively of the fundamental facts of educational psychology. This course is designed for those who intend to major in educational psychology and for all those who wish a thorough grounding in the psychological principles of education. The first part of this double course (271) will deal with problems of conduct and individual differences; the second part (272) will deal with problems of learning. *Five hours a week, fall and winter quarters.* Professor Jordan.

299. PRINCIPLES OF SECONDARY EDUCATION. Credit: 1 course.

A systematic course for graduate students, intended primarily for those who have not had Education 99. This course will embrace a study of the American high school, its evolution, organization, administration, functions, and problems. It is designed primarily for high school principals and graduate students who are looking forward to high school principalships. Textbooks, lectures, readings, and reports. A term paper will be required of each student before credit for the course will be allowed. *Five hours a week, spring quarter.* Professor Walker.

303ac. PROBLEMS IN EDUCATIONAL ADMINISTRATION. Prerequisite, Education 101, or its equivalent, and one other course in educational administration. Credit: 1 course.

A graduate course offering opportunity for intensive study and research on selected problems in the field of educational administration. The problems will be selected by the class each year, making it possible for the student to take this course more than once. *Three hours a week, fall and spring quarters.* Professor Trabue.

341abc. FOUNDATIONS OF EDUCATION IN THE SOUTH. Credit: 1½ courses.

This is a research course in modern educational practices and institutions and is open only to those advanced students who have had Education 141, or Education 142, or the equivalent. Various educational agencies will be studied through investigations, reports, and conferences. *Three hours a week, fall, winter, and spring quarters.* Professor Knight.

375. THESIS COURSE. Maximum credit: 1 course.

This is a course of strictly graduate grade in which there will be taken up such work as is necessary for each student in connection with the writing of his degree thesis. It is intended for those students whose graduate major is in education, but students whose thesis topics are closely related to education are invited to attend and to take part in the discussion. *Three hours a week.* Professors in the Department of Education.

376. SEMINAR COURSE. Credit: ½ course each quarter.

A research course in a special field under the direction of a member of the department. Students may register and receive credit for one, two, or three quarters. *Three hours a week, fall, winter, and spring quarters.*

398-399. PROBLEMS IN SECONDARY EDUCATION. Credit: 2 courses. (Either part may be taken for one course credit.)

This double course is intended for advanced students and is primarily a course in investigation. To be admitted to it, a student must have pursued other courses in secondary education. Students who have not taken Education 99 may be admitted only with special permission of the instructor. At the beginning of the course each student is required to select some one problem for special investigation. A thesis will be required of each student. Throughout the two quarters regular class discussions will be held on present-day problems in secondary education and assigned readings will be required. *Five hours a week, fall and winter quarters.* Professor Walker.

¶DEPARTMENT OF ENGLISH

Professors COFFMAN, KOCH, BOOKER, MCKIE, TAYLOR, THRALL, PAINE; Associate Professors HOWELL, MACMILLAN, HUDSON, ERICSON, RUSSELL; Assistant Professors MCCLAMROCH, ADAMS, OLSEN, BOND, SELDEN, SHARPE; Instructors BAILEY, WILSON, RUSSELL, HORNER, SENSABAUGH, DAVIS, SPIVEY; Teaching Fellows MAHLER, WILLIAMS, HAGOOD; Assistants BROWN, MOORE, WELLS, COX, CARDWELL, MILLER.

Courses for Undergraduates

NOTE. English 1-2-3 and English 21-22 are prerequisite to all advanced courses in the department. Juniors will not be admitted to courses for advanced undergraduates except by special permission.

1-2-3. FRESHMAN ENGLISH. Required of all Freshmen except those in the School of Engineering. Credit: 1½ courses.

English 1 (fall) has for its object practical control of the sentence as a rhetorical unit and an understanding of the relation of sentence structure to paragraph structure. English 2 (winter) centers attention upon the paragraph and begins consideration of the technical problems of the longer theme. English 3 (spring) is devoted to study of the structure and style of the essay, and undertakes an approach toward the problems of the literature course in the sophomore year. In all three quarters the student pursues directed reading, writes frequent themes, and has personal conferences with his instructor. (Students who fail to qualify for English 1 will be required to take a preliminary course without credit.) *Three hours a week, throughout the year.* Professors Hudson (Chairman), McClamroch, Adams; Messrs. Horner, Russell, Wilson, Sensabaugh, Spivey, Wells, Brown, Williams, Moore, Cox, Hagood, Mahler, Cardwell, Miller.

4. FRESHMAN ENGLISH. Credit: ½ course.

A reading and writing course, of somewhat more mature content than English 3, for students of the advanced sections of Freshman English who

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¶UNDERGRADUATE MAJORS IN ENGLISH

In the College of Liberal Arts:

General: English 50, 91 or 92 or 93, 100, 70 or 112 or 125; two of the following: 81, 82, 88, 141 (but only one course in American Literature may be counted here); and three other courses in English.

Dramatic: English 50, 113, 133, 149 or 162, 161, and three courses in dramatic composition or theatre arts.

For prospective teachers of English: English 41, 42 or 44, 45; 50, 52, 70, 81, 88 or 89, and courses in the materials and methods of teaching high school English (see the Department of Education).

have completed the regular freshman course but may not advantageously take up the English 21 literature course. *Three hours a week, spring quarter.* Messrs. Horner, Russell, Sensabaugh.

The following courses, 9abc, 29, 59, and 60abc, are offered by the Department of English for students in the School of Engineering. They are not open to other students.

9abc. COMPOSITION FOR ENGINEERS: INTRODUCTORY COURSE. Open only to students in the School of Engineering. Credit: 1 course.

Two hours a week and weekly conferences, fall, winter, and spring quarters. Mr. Bailey (Chairman).

21-22. ENGLISH LITERATURE. Prerequisite, English 1-2-3. Credit: 2 courses.

Study of important significant literary productions chronologically considered. *Five hours a week, two quarters, fall and winter, fall and spring, or winter and spring quarters.* Professors Paine (Chairman), Booker, McKie, Taylor, Thrall, Howell, MacMillan, Ericson, Hudson, McClamroch, Adams, Olsen, Bond, Sharpe.

29. LITERATURE FOR ENGINEERS. Open only to students in the School of Engineering. Credit: 1 course.

Five hours a week, fall or winter quarter. Professor Howell.

The following two courses are at once courses in literature and courses in speech. As literature courses, they are based on the pedagogical principle of "impression through expression." As speech courses, they deal with voice training and aim at the cultivation of clear and effective expression. In each course original analyses of works read and the oral reading of original papers are required.

41. THE ORAL INTERPRETATION OF DRAMATIC LITERATURE. Credit: 1 course.

Elizabethan, eighteenth-century, and modern plays are used to give variety in dramatic expression. *Five hours a week, fall quarter.* Professor McKie.

42. THE ORAL INTERPRETATION OF NON-DRAMATIC LITERATURE. Credit: 1 course.

A wide variety of poetry from Milton to Masefield is the main material in this course, though work is required in the reading of suitable prose. *Five hours a week, winter quarter.* Professor McKie.

44. PUBLIC SPEAKING: INTRODUCTORY COURSE. Credit: 1 course.

Emphasis on organization of material, outlines, delivery, problems of attention and persuasion. Assigned reading in contemporary public problems as a basis for speaking. *Five hours a week, fall or spring quarter.* Professor Olsen.

45. ARGUMENTATION AND PUBLIC DISCUSSION. Credit: 1 course.

Includes analysis of questions, evidence, types of argument, fallacies, problems of persuasion, and practice in parliamentary procedure. *Five hours a week, winter quarter.* Professor Olsen.

50. SHAKESPEARE. Credit: 1 course.

A study of Shakespeare's plays. About twenty representative comedies, tragedies, and histories will be studied. *Five hours a week, fall quarter* (Professor Koch), *spring quarter* (Professor Taylor).

Registration in English 52, 53, 54 is limited. Before registering for these courses, students must secure the permission of the instructors.

52. ADVANCED COMPOSITION: THE TECHNIQUE OF EXPOSITION. Credit: 1 course.
A course in expository writing for students desiring practice in organization of material. *Five hours a week, fall quarter* (Professor Russell), *spring quarter* (Professor Howell).

53. CREATIVE WRITING. Credit: 1 course.
Study of and practice in various forms of original and imaginative writing, including verse, the short story, and the novel. Class criticism and discussion. *Five hours a week, winter quarter.* Professor Russell.

54. CREATIVE WRITING. Credit: 1 course.
To some extent parallel to the above course, but paying special attention to modern, experimental, and regional writing. *Five hours a week, spring quarter.* Professor Russell.

The following three courses in Play Writing, English 55, 56, and 57, should be taken consecutively. If it is not practicable to do this, however, the student may, with the consent of the instructor, take any one of the three courses offered.

55. PLAY WRITING. Credit: 1 course.
A practical course in playwriting. Emphasis is placed on the materials of the student's own experience and observation. Plays written in the course are selected for experimental production, the authors directing them. *Four hours lecture and two hours practical work a week, fall quarter. Fee for experimental productions, $2.00.* Professor Koch.

56. PLAY WRITING. Credit: 1 course.
A consideration of the elements of play construction and practice in the one-act form. Experimental and public productions by The Carolina Playmakers of plays written in the course. *Four hours lecture and two hours practical work a week, winter quarter. Fee for experimental productions, $2.00.* Professor Koch.

57. PLAY WRITING. Credit: 1 course.
Practice in writing both one-act and full-length plays. Experimental and public productions by The Carolina Playmakers of plays written in the course. *Four hours lecture and two hours practical work a week, spring quarter. Fee for experimental productions, $2.00.* Professor Koch.

59. ADVANCED TECHNICAL COMPOSITION. Open only to students in the School of Engineering. Credit: 1 course.
Five hours a week, fall or spring quarter. Professor Howell.

60abc. PUBLIC SPEAKING FOR ENGINEERS. Open only to students in the School of Engineering. Credit: 1 course.
Two hours a week, fall, winter, and spring quarters. Professors McKie, Olsen.

The following six courses, English 61, 62, 63, 64, 65, 66, are introductory courses in the theory and practice of the theatre designed for students participating in the work of The Carolina Playmakers. All students registered for the three courses, English 64, 65, 66, will be required to fill positions on the technical staff of the productions of The Carolina Playmakers.

61. ACTING. Credit: 1 course.
Training in the technique of acting. *Two hours lecture and six hours practical work a week, fall quarter. Fee for materials, $1.00.* Professor Selden.

62. REHEARSAL AND PERFORMANCE. Credit: 1 course.
The theory and practice of ensemble acting from the point of view of both the actor and the director. *Two hours lecture and six hours practical work a week, winter quarter. Fee for materials, $1.00.* Professor Selden.

63. PLAY DIRECTION. Credit: 1 course.
The theory and practice of play directing. *Two hours lecture and six hours practical work a week, spring quarter. Fee for materials, $2.00.* Professor Selden.

64. SCENERY CONSTRUCTION AND PAINTING. Credit: ½ course.
Elementary theory and practice in the construction and painting of scenery for the stage. *One hour lecture and four hours laboratory a week, fall quarter. (See note above). Fee for materials, $1.00.* Mr. Davis.

65. STAGE LIGHTING. Credit: ½ course.
Elementary theory and practice in stage lighting, including the choice of equipment and its control in the theatre. *One hour lecture and four hours laboratory work a week, winter quarter. (See note above). Fee for materials, $1.00.* Mr. Davis.

66. STAGE DESIGN. Credit: ½ course.
The history of and elementary theory and practice in the designing of scenery for the stage, through the preliminary sketch, the model, and the working drawings. A considerable amount of simple architectural drafting will be required. *One hour lecture and four hours laboratory work a week, spring quarter. (See note above.) Fee for materials, $1.00.* Professor Selden; Mr. Davis.

70. CHAUCER. Credit: 1 course.
The essential work of the course is a reading of *The Canterbury Tales* and certain other selected works of Chaucer with a view to revealing the poet as a literary artist. *Five hours a week, winter quarter.* Professor Coffman.

75. BROWNING. Credit: 1 course.
(1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Booker.

79. ENGLISH LITERATURE, 1890-1920. Credit: 1 course.
The aim of this course is to follow the main currents of thought in the more significant literature of the three decades closing with the World War. *Five hours a week, fall quarter.* Professor Booker.

81. AMERICAN LITERATURE. Credit: 1 course.
A survey of American literature from 1830 to 1855, with special attention to Poe, Emerson, Thoreau, Lowell, Hawthorne, and Melville. *Five hours a week, fall quarter.* Professor Adams.

82. AMERICAN LITERATURE. Credit: 1 course.
A survey of American literature from Whitman to the present with special emphasis upon the literature of the South. The course includes a study of the local color movement, traces the rise of realism, and surveys the social literature of the novels after 1880. *Five hours a week, spring quarter.* Professors Adams, Paine.

88. VICTORIAN LITERATURE I, 1832-1860. Credit: 1 course.
A survey with special attention to Carlyle, Tennyson, and Browning. *Five hours a week, winter quarter.* Professor Booker.

89. VICTORIAN LITERATURE II, 1860-1890. Credit: 1 course.
A survey with special attention to Ruskin, Rossetti, Morris, and Swinburne. *Five hours a week, spring quarter.* Professor Booker.

91. THE ENGLISH NOVEL. Credit: 1 course.
A study of the English novel from Defoe to Hardy. *Five hours a week, spring quarter.* Professor MacMillan.

93. ENGLISH DRAMA. Credit: 1 course.
A study of English drama from the beginning to 1900. *Five hours a week, fall quarter.* Professor MacMillan.

98. CONTEMPORARY POETRY. Credit: 1 course.
A study of selections from American and English poets whose work has achieved an individual yet essentially homogeneous expression chiefly since 1918. *Five hours a week, spring quarter.* Professor McClamroch.

100. DIRECTED READINGS. Credit: 1 course.
Directed readings in English literature. In the fall quarter, required of seniors majoring in English whose course average in the department is lower than B, but open to all who desire to prepare for the comprehensive examination. In the spring quarter, open to a small number of advanced students in any department who desire to read in the field of their literary interests. Permission of the instructor is required for registration in the spring quarter. *Five hours a week, fall or spring quarter.* Professor Coffman.

DEBATING 1. Credit: ½ course.
A course in the discussion and analysis of current public questions. Occasional lectures by various members of the faculty. Weekly meetings throughout the year. Professor Olsen, Chairman.

Courses for Graduates and Advanced Undergraduates

101. OLD ENGLISH: INTRODUCTORY COURSE. Credit: 1 course.
A study of Old English grammar and syntax. A considerable amount of Old English prose is read. *Five hours a week, fall quarter.* Professor Ericson.

105. MEDIEVAL ROMANCE IN ENGLISH. Credit: 1 course.
A survey of medieval romance and romance materials in English literature, with particular attention to the Arthurian tradition. *Five hours a week, winter quarter.* Professor Thrall.

111. ENGLISH LITERATURE OF THE RENAISSANCE. Credit: 1 course.
A survey of the literature of the Elizabethan period, exclusive of the drama. *Five hours a week, fall quarter.* Professor Thrall.

112. SPENSER. Credit: 1 course.
The works of Spenser are studied in the light of the life, times, and culture of the poet, with some consideration of the problems involved in such a study. *Five hours a week, spring quarter.* Professor Thrall.

113. ENGLISH DRAMA. 1500-1600. Credit: 1 course.
Five hours a week, winter quarter. Professor Sharpe.

114. ENGLISH DRAMA, 1600-1642. Credit: 1 course.
Five hours a week, spring quarter. Professor Sharpe.

121. ENGLISH LITERATURE, 1616-1700. Credit: 1 course.
The non-dramatic literature of the period. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Howell.

125. MILTON. Credit: 1 course.
The works of Milton are studied in the light of the life, times, and culture of the poet, with some consideration of the problems involved in such a study. *Five hours a week, fall quarter.* Professor Taylor.

131. ENGLISH LITERATURE, 1700-1780. Credit: 1 course.
The non-dramatic literature of the period. *Five hours a week, fall quarter.* Professors MacMillan, Bond.

133. RESTORATION AND EIGHTEENTH-CENTURY DRAMA. Credit: 1 course.

A study of the drama from 1660 to 1800. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor MacMillan.

141. ENGLISH LITERATURE, 1780-1830. Credit: 1 course.

A survey of English literature of the romantic period with especial attention to the greater poets. *Five hours a week, winter quarter.* Professor Hudson.

149. NINETEENTH-CENTURY DRAMA. Credit: 1 course.

A study of representative English plays in the nineteenth century. (1934-1935 and alternate years.) *Five hours a week, spring quarter. Professor Koch.*

151. EARLY AMERICAN LITERATURE. Credit: 1 course.

A survey of the literature of the colonial, revolutionary, and early national periods, including Bryant, Irving, and Cooper. *Five hours a week, fall quarter.* Professor Paine.

161. COMPARATIVE DRAMA. Credit: 1 course.

A general survey of the drama and the theatre from Æschylus to Ibsen. The development of dramatic literature is studied through representative plays (in translation) of the leading European dramatists. *Five hours a week, winter quarter.* Professor Koch.

162. MODERN DRAMA. Credit: 1 course.

A study of representative plays of recent times, beginning with Ibsen. Special attention is given to the function of the drama in interpreting modern thought and changing social conditions. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Koch.

163. LITERARY CRITICISM. Credit: 1 course.

The principles that have animated classical, romantic, and realistic literature. *Five hours a week, spring quarter.* Professor Bond.

167. THE ENGLISH BALLAD. Credit: 1 course.

A study of the English and Scottish popular ballads, with a survey of ballad survivals in America, particularly in North Carolina. Students in the course who may have access to ballads in oral circulation will be encouraged to collect them. *Five hours a week, spring quarter.* Professor Hudson.

170. THE HISTORY OF THE ENGLISH LANGUAGE. Credit: 1 course.

The English language in the light of its historical development. Study of the chief linguistic influences and tendencies as seen in literary specimens of the various periods. *Five hours a week, spring quarter.* Professor Ericson.

Courses Primarily for Graduates

201. STUDIES IN OLD ENGLISH LITERATURE: BEOWULF. Prerequisite, English 101. Credit: 1 course.

Five hours a week, winter quarter. Professor Ericson.

202. MIDDLE ENGLISH. Credit: 1 course.

The main purpose of the course is to acquaint the student with the literature of the period by relation to the social, political, and religious background. A fuller study will be made of the historical and philological relations of Middle English than in English 208-209-210. *Five hours a week, spring quarter.* Professor Coffman.

203. MEDIEVAL DRAMA. Credit: 1 course.

A study of the origin and development of the religious drama in Western Europe; special consideration of the craft cycles and the moralities. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Coffman.

208-209-210. CHAUCER. Credit: 1½ courses.

The work of the course will consist chiefly of a reading and discussion of Chaucer's works, with attention to the critical and historical problems involved in their interpretation, and with some consideration of Chaucer's language. Previous training in old or Middle English is not prerequisite. *Conferences and reports, two hours a week, fall, winter, and spring quarters.* Professor Coffman.

The following three courses in Play Writing, English 225, 226, 227, should be taken consecutively. If it is not practicable to do this, however, the student may, with the consent of the instructor, take any one of the three courses offered.

225. PLAY WRITING, ADVANCED COURSE. Credit: 1 course.

A practical course in playwriting and experimental production. Emphasis is placed on the native tradition and present-day life of the region with which the student is most familiar. The student is expected to direct experimental productions of plays written in the course. The best of these are given public production by The Carolina Playmakers. *Four hours lecture and two hours practical work a week, fall quarter. Fee for experimental productions, $2.00.* Professor Koch.

226. PLAY WRITING, ADVANCED COURSE. Credit: 1 course.

The principles of dramatic construction and practice in the writing and production of one-act and full-length plays. Experimental and public productions. *Four hours lecture and two hours practical work a week, winter quarter. Fee for experimental productions, $2.00.* Professor Koch.

227. PLAY WRITING, ADVANCED COURSE. Credit: 1 course.

Practice in writing the full-length play with experimental and public productions by The Carolina Playmakers. *Four hours lecture and two hours practical work a week, spring quarter. Fee for experimental productions, $2.00.* Professor Koch.

231-232. SHAKESPEARE. Credit: 2 courses.

The works of Shakespeare are studied with emphasis upon the historical and critical problems which they present. *Five hours a week, fall and winter quarters.* Professor Taylor.

243. VICTORIAN LITERATURE, 1832-1890. Credit: 1 course.

This course describes for graduates the Victorian literary monuments and the historical and critical material concerning them. *Five hours a week, spring quarter.* Professor Booker.

283. AMERICAN LITERATURE, 1830-1855. Credit: 1 course.

This survey course follows English 151, which is not, however, prerequisite. The chief authors are Poe, Emerson, Thoreau, Longfellow, Lowell, Hawthorne, and Melville. Especial attention is given to the literature of the South. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professors Adams, Paine.

284. AMERICAN LITERATURE, 1855-1900. Credit: 1 course.

This survey course follows English 283, which is not, however, prerequisite. The chief authors are Lanier, Whitman, Mark Twain, Bret Harte, Howells, and James. Stress is placed upon the cultured and folk literature of the South, the influence of Whitman upon poetry, the rise of realism, literary criticism, and the dominance of magazines. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Paine.

307. SEMINAR: STUDIES IN MEDIEVAL LITERATURE. Credit: 1 course.

Research in special problems concerning medieval drama, Chaucer, and other vernacular literature of the middle ages. *Five hours a week, winter quarter.* Professor Coffman.

310. SEMINAR: STUDIES IN ELIZABETHAN LITERATURE. Credit: 1 course.

Research in special problems in Elizabethan literature. *Five hours a week, spring quarter.* Professor Taylor.

312. SEMINAR: STUDIES IN SEVENTEENTH-CENTURY LITERATURE. Credit: 1 course.

Research in special problems in the literature and thought of the seventeenth century. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Howell.

313. SEMINAR: STUDIES IN EIGHTEENTH-CENTURY LITERATURE. Credit: 1 course.

Special problems in the literary and intellectual movements of the eighteenth century. *Five hours a week, spring quarter.* Professors MacMillan, Bond.

317. SEMINAR: STUDIES IN NINETEENTH-CENTURY ROMANTICISM IN ENGLAND. Credit: 1 course.

Wordsworth and Coleridge: the English and Continental aspects of their thought and art. *Five hours a week, fall quarter.* Professor Hudson.

318. SEMINAR: STUDIES IN AMERICAN LITERATURE. Credit: 1 course.

Five hours a week, winter quarter. Professor Paine.

320. SEMINAR: STUDIES IN VICTORIAN LITERATURE. Credit: 1 course.

Special problems in the literature appearing between 1832 and 1890. *Five hours a week, winter quarter.* Professor Booker.

331-332. BIBLIOGRAPHY AND METHODOLOGY. Credit: 1 course.

A course designed to aid students in preparing term papers, theses, and dissertations. The bibliographical guides for the study of English are presented, the problems of literary research are discussed, and the standard procedures and forms in writing scholarly papers are taught. Required of all candidates for the A.M. and Ph.D. degrees. *Three hours a week, fall and winter quarters.* Professor Paine.

340. SPECIAL READINGS. Credit: 1 course.

Research in a special field under the direction of a member of the department. This course may not be repeated for credit.

341. SPECIAL RESEARCH. Credit: 1 course.

Research in a special field under the direction of a member of the department.

Attention is called to the courses in philology and advanced literary study offered in the Department of Classics (Latin 202, Latin Epigraphy; Latin 203, Latin Paleography), General and Comparative Literature, Germanic Languages (German 221, Introduction to Comparative Philology; German 201, Gothic, etc.), and Romance Languages (French 221-222-223, Old French; French 225, Provencal; Celtic 205, Middle Irish; Spanish 221-222, Early Spanish; Italian 131-132, Dante; etc.).

DEPARTMENT OF GENERAL AND COMPARATIVE LITERATURE

Professors HOWE (Chairman), KOCH, BERNARD, LEAVITT, HOLMES, THRALL, TAYLOR, COFFMAN, BROWN, ADAMS, HUSE; Associate PROFESSORS LYONS, METZENTHIN, BOGGS; Assistant Professors STOUDEMIRE, WILEY, BOND.

Courses for Undergraduates

61, 62. CLASSICAL LITERATURE. Credit: 1 course each quarter.
A study of masterpieces of Greek and Latin literature in English translation with special reference to the contribution of ancient civilization to modern thought. *Five hours a week, fall and winter quarters.* Professors Bernard, Howe.

65. ORIENTAL LITERATURE. Credit: 1 course.
The epics, dramas, etc., of the Hindus, Chinese, and other peoples are studied for their revelation of the Oriental outlook on life, and for their contribution to Occidental literature and thought. (1933-1934 and alternate years.) *Five hours a week, spring quarter.* Professor Holmes.

75. SHAKESPEARE. Credit: 1 course.
A study of Shakespeare's plays. About twenty representative comedies, tragedies, and histories will be studied. *Five hours a week, fall quarter.* (Professor Koch), *spring quarter* (Professor Taylor).

Courses for Graduates and Advanced Undergraduates

105. MEDIEVAL ROMANCE IN ENGLISH. Credit: 1 course.
A survey of Medieval romance and romance materials in English literature, with particular attention to the Arthurian tradition. *Five hours a week, spring quarter.* Professor Thrall.

111. THE LATIN EPIC. Credit: 1 course.
The history of the Latin Epic; detailed study of the *Æneid. Five hours a week, spring quarter.* Professor Howe.

112. THE POETRY OF OVID. Credit: 1 course.
The reading in English of the complete works of Ovid. Special critical studies in the *Metamorphoses.* The influence of Ovid on later writers. *Five hours a week, fall quarter.* Professor Howe.

113. THE GREEK EPIC. Credit: 1 course.
Epic as a literary form; the *Iliad* and *Odyssey;* origins, Mycenaean civilization, literary characteristics, comparison of the chief English translations, comparison with Norse, Latin, Italian, and English epic. *Five hours a week, winter quarter.* Professor Bernard.

121, 122. LESSING AND SCHILLER IN ENGLISH TRANSLATION. Credit: ½ course each quarter.
Their lives and works; their philosophical, theological, social, and literary views; their indebtedness to earlier literature and their influence on later thinkers and writers. Course 121 (Lessing), *three hours a week, winter quarter;* Course 122 (Schiller), *three hours a week, spring quarter.* (1934-1935 and alternate years). Professor Metzenthin.

123. GOETHE IN ENGLISH TRANSLATION. Credit: 1 course.
Study of the man, thinker, and poet in connection with the German and general European movements of thought and literature in his time. Lectures and reports. *Five hours a week, spring quarter.* (1933-1934 and alternate years.) Professor Brown.

125. MILTON. Credit: 1 course.
The works of Milton are studied in the light of the life, times, and culture of the poet, with some consideration of the problems involved in such a study. *Five hours a week, fall quarter.* Professor Taylor.

151. THE MIDDLE AGES. This course alternates with course 152. Credit: 1 course.
A survey of Medieval France, England, Germany, Spain, Italy, and Byzan-

tium, from the point of view of civilization and especially of art and literature. (1933-1934 and alternate years.) *Five hours a week, fall quarter.* Professor Holmes.

152. THE RENAISSANCE. This course alternates with course 151. Credit: 1 course.

An account of the establishment of modern European culture. Lectures on the history, science, fine arts, literary scholarship, and literature of the Renaissance in Italy, France, Germany, the Netherlands, and England. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professors Holmes (Chairman), Adams, Lyons.

155. GREEK DRAMATIC LITERATURE. Credit: 1 course.

A course designed to embrace the origin, development, technique, and content of Greek drama, with emphasis on tragedy. An interpretation of Greek life and thought as contributing to world progress. (1933-1934 and alternate years.) *Five hours a week, winter quarter.* Professor Bernard.

156. DANTE IN ENGLISH TRANSLATION. Credit: 1 course.

The *Vita Nuova* and the *Divine Comedy*; the precursors of Dante and the poets of the *dolce stil nuovo*. Special studies of Dante's political and social philosophy, with particular emphasis on Dante as a poet and as a guide. *Five hours a week, fall quarter.* Professor Huse.

157. CERVANTES IN ENGLISH TRANSLATION. Credit: 1 course.

Consideration of the Romances of Chivalry in Spain; study of Cervantes' *Don Quixote* and the *Exemplary Novels* in English translation. *Five hours a week, spring quarter.* Professor Stoudemire.

159. FRENCH CLASSICISM. Credit: 1 course.

A general survey of the origins of classicism in France. Assigned readings in the Greek and Latin writers with emphasis on the modification of their art which explains the masterpieces of the French 17th century. A large part of the course will be given over to the plays of Corneille, Molière, Racine, and their contemporaries. The decline of classicism in France; the gradual breaking down of classic standards, and the evolution toward an unrestricted type of literature. *Five hours a week, spring quarter.* Professor Wiley.

161. COMPARATIVE DRAMA. Credit: 1 course.

A general survey of the drama and the theatre from Aeschylus to Ibsen. Special attention is given to the function of the drama in representative plays of the leading European dramatists. *Five hours a week, winter quarter.* Professor Koch.

162. THE MODERN DRAMA. Credit: 1 course.

A study of representative plays of recent times, beginning with Ibsen. Special attention is given to the function of the drama in interpreting modern thought and changing social conditions. (1933-1934 and alternate years.) *Five hours a week, spring quarter.* Professor Koch.

163. LITERARY CRITICISM. Credit: 1 course.

The principles which have animated classical, romantic, and realistic literature. *Five hours a week, spring quarter.* Professor Bond.

185. INTRODUCTION TO FOLKLORE. Credit: 1 course.

A study of folk literature and its cultural significance; of the theories of origin of themes; of the various types, such as the ballad, legend, myth, tale, and proverb. Methods of gathering folklore are evaluated. *Five hours a week, winter quarter.* Professor Boggs.

DEPARTMENT OF GEOLOGY

Professors PROUTY, COBB; Associate Professors MACCARTHY, DOUGLAS; Assistant Professor EMORY; Instructor MARTIN; Teaching Fellow ALEXANDER; Assistant KJELLESVIG.

11-12. INTRODUCTION TO GEOLOGY. Credit: 2 courses.

Lectures with laboratory and field work; laboratory work in the first quarter on common minerals and rocks, and map interpretation; in the second quarter on geological folios and the more common fossils. The first quarter deals with physical geology, with physiographic processes and their results; the second quarter is a study of the outlines of historical geology. Both Geology 11 and Geology 12 are given each quarter. Geology 11 is offered during the summer on the transcontinental tour also. *Four lecture and four laboratory hours a week, every quarter. Labortory fee, $3.00 a quarter.* Professors Prouty, MacCarthy, Douglas; Messrs. Martin, Alexander.

14. PHYSICAL GEOGRAPHY. Credit: 1 course.

Principles of physical geography, with special application to the North American Continent. Lectures, assigned readings, laboratory work. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $2.50.* Professors Prouty, MacCarthy, Douglas, Emory.

This course may also be taken as a field course during the summer.

41. PRINCIPLES OF GEOLOGY. Prerequisite, Geology 11-12. Credit: 1 course.

Principles of geology, including the history of geological science; lectures, field work, and library work, with reports. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.00.* Professor Douglas.

43-44. MINERALOGY. Prerequisite, Geology 11-12, Chemistry 1-2. Credit: 2 courses.

Crystallography, physical and chemical properties of minerals, blow-pipe analysis; lectures, laboratory work, and field work. *Two lecture and six laboratory hours a week, fall and winter quarters. Laboratory fee, $5.00 a quarter.* Professor MacCarthy.

45. METEOROLOGY. Credit: 1 course.

A study of the atmosphere and the factors controlling the weather; the making and interpretation of weather maps; weather forecasting. *Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $2.50.* Professor MacCarthy.

47. PALEONTOLOGY. Prerequisite, Geology 11-12. Credit: 1 course.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.50. Professor Douglas.

48-49. SUMMER FIELD COURSE IN GEOLOGY. Prerequisite, Geology 11-12. Credit: 2 courses.

A six weeks' course to be given in North Carolina and bordering states. In this course economic, structural, and stratigraphic geology and geological mapping will be emphasized. This course will coincide with the scheduled six weeks' summer school course. This course may also be taken with transcontinental tour. *Equivalent of five hours a week for two quarters.* Professors Prouty, MacCarthy, Douglas.

51-52. INDUSTRIAL AND COMMERCIAL GEOGRAPHY. Credit: 2 courses.

Lectures, library work, and laboratory work. The course deals with man's interaction with his varying environments in the development of industries,

and with the geographic conditions of different countries as giving rise to commerce. *Five hours a week, fall and winter quarters. Laboratory fee, $2.50 a quarter.* Professors Cobb, Emory.

53. HUMAN GEOGRAPHY. Credit: 1 course.

Lectures, library work, and laboratory work. The course consists of the principles studied in Geology 51-52 in their application to some one of the continents. *Five hours a week, spring quarter. Laboratory fee, $2.50.* Professors Cobb, Emory.

56. ADVANCED WORK IN PHYSIOGRAPHY. Prerequisite, Geology 11-12. Credit: ½ course.

Lectures, field work, and laboratory work, dealing in detail with physiographic processes and their results; geomorphology. An extended field study is required in this course. *Three hours a week, lectures and laboratory, spring quarter. Laboratory fee, $2.00.* Professor Emory.

57. GEOGRAPHY OF NORTH AMERICA. Credit: 1 course. (Not open to freshmen).

This course deals with the physical features, soils, minerals, climatic resources, and transportation facilities of North America. These correlated factors will be utilized to explain the activities of the various regions. *Five hours a week, reading and reports, winter quarter.* Professor Emory.

77-78. ENGINEERING GEOLOGY. For students in engineering. Credit: 2 courses.

Three lecture and four laboratory hours a week, fall and winter quarters. Laboratory fee, $3.50 a quarter. Professor Prouty.

Courses for Graduates and Advanced Undergraduates

105. ELEMENTS OF GEOPHYSICS. Prerequisite, Geology 11-12 and Mathematics 1-2. Credit: 1 course.

The fundamental principles of geophysics, the application of these principles to practical problems. This course may be continued for not more than two additional quarters under the numbers 106 and 107. *Four lecture and two laboratory hours a week, fall quarter. Laboratory fee, $5.00 a quarter.* Professor MacCarthy.

111-112. ECONOMIC GEOLOGY. Prerequisite, Geology 11-12, 43-44, Chemistry 1-2. Credit: 2 courses.

Lectures, laboratory work, and reports. During the fall quarter the nonmetallic minerals will be studied. The metallic minerals will be considered in the winter quarters. These courses may be continued under numbers 113-114. (1933-1934 and alternate years.) *Four lecture and two laboratory hours a week, fall and winter quarters. Laboratory fee, $3.50 a quarter.* Professor Prouty.

121-122. STRUCTURAL AND FIELD GEOLOGY. Prerequisite, Geology 11-12. Credit: 2 courses.

Lectures, with laboratory, field work, problems, and conferences. The first quarter deals with structural geology and map interpretation; the second quarter with geological note taking, surveying, map making, and field practice. (1934-1935 and alternate years.) *Four lecture and two laboratory hours a week, fall and winter quarters. Laboratory fee, $3.50 a quarter.* Professor Prouty; Assistants.

123. OIL GEOLOGY. Prerequisite, Geology 121-122. Credit: 1 course.

Lectures, laboratory work, and reports. A study of the origin, distribution, and accumulation of petroleum, with special relation to the oil fields of North

America; methods of prospecting oil, recovery of oil, the valuation of oil properties. *Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $3.50.* Professor Douglas.

131. ADVANCED CRYSTALLOGRAPHY. Prerequisite, Chemistry 1-2 and Geology 43-44. Credit: 1 course.

This course includes a detailed consideration of the nature of crystals and crystalline substances, the use of both contact and reflecting goniometer, and crystal drawing. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.50.* Professor MacCarthy.

133. PETROLOGY. Prerequisite, Geology 11-12, 43-44, Chemistry 1-2. Credit: 1 course.

Laboratory work on rocks; a study of the origin, classification, and distribution of rocks. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.50.* Professor Prouty; Assistant.

134. PETROGRAPHY. Prerequisite, Geology 11-12, 43-44, Chemistry 1-2. Credit: 1 course.

Lectures, laboratory work on the microscopic physiography of the rock forming minerals; optical mineralogy and the theory of light as applied to the polarizing microscope; minerals as observed in thin rock sections. *Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, $3.50.* Professor Prouty.

141, 142, 143. ADVANCED FIELD WORK AND SPECIAL RESEARCH IN GEOLOGY AND GEOGRAPHY. Credit: 3 courses.

Problems and work adapted to the special needs of the student. For graduates and for specially prepared seniors. Students in this course are expected to keep Saturday open for field work. These courses may be continued under the same numbers for more than one year as the subject advances, credit being given for each repetition. *Five hours a week, fall, winter, and spring quarters.* Professors Prouty, MacCarthy, Douglas, Emory; Assistants.

148-149. SUMMER FIELD COURSE IN GEOLOGY. Credit: 2 courses.

This course is similar to 48-49 but is to be given in alternate years and in a different type of geological area.

171, 172, 173. ADVANCED PALEONTOLOGY. Credit: 3 courses.

A study of the clasification and generic and specific determination of the invertebrata, chiefly fossil. These courses may be continued under numbers 174, 175, 176. *Three lecture and four laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.50 a quarter.* Professor Douglas.

181, 182, 183. ADVANCED HISTORICAL GEOLOGY. Prerequisite, Geology 11-12. Credit: 3 courses.

A study of the principles of historical geology and stratigraphy, the history of stratigraphic geology, the origin of the earth, and the geography, life, and geologic events of the archaeozoic, proterozoic, and paleozoic eras of the earth's history. *Five hours a week, fall, winter, and spring quarters.* Professor Douglas.

191, 192, 193. APPLIED GEOPHYSICS. Prerequisite, Mathematics 24, 25. Credit: 1 course each quarter.

A survey of geophysical methods used for the detection of ore deposits, oil, etc.; a description of geophysical instruments and their use; actual geophysical surveys of selected areas about Chapel Hill. *Three lecture and four laboratory hours a week, fall, winter, and spring quarters.* Professor MacCarthy.

Courses for Graduates

304-305-306. SPECIAL RESEARCH IN GEOLOGY AND GEOGRAPHY. Credit: 3 courses.

The student is expected to devote six weeks to work in the field, accompanied by the instructor, and to work up his results during the first quarter of the college year. The entire research constitutes three courses. These courses may be continued under the same numbers for more than one year as the subject advances, credit being given for each repetition. *Equivalent of five hours a week, fall, winter, and spring quarters.* Professors Prouty, MacCarthy, Douglas, Emory.

307-308-309. SPECIAL RESEARCH. Credit: 3 courses.

Special Research in economic geology, in historical geology, in paleontology, petrology and petrography, and in geography, two quarters of which must be taken as a seminar course. These courses may be continued under the same numbers for more than one year as the subject advances, credit being given for each repetition. *Equivalent of five hours a week, fall, winter, and spring quarters.*

The Geological Seminar meets fortnightly for the review and discussion of current geological literature, and for the presentation of original papers.

DEPARTMENT OF GERMANIC LANGUAGES

Professors *TOY, BROWN; Associate Professor METZENTHIN; Instructors SPANN, COENEN; Teaching Fellow HOLBROOK.

Courses for Undergraduates

1-2. ELEMENTARY COURSE. Credit: 2 units or 2 courses.

Grammar: written and oral exercises; translation; sight reading. This course may be counted for credit toward the A.B. degree provided it is followed by German 3-4 and 21. It may be counted for credit as an elective by students who have selected for their language requirements two other foreign languages. *Five hours a week, every quarter.* Professor Metzenthin; Messrs. Spann, Coenen.

3-4. INTERMEDIATE COURSE. Prerequisite, German 1-2 or the equivalent. Credit: 2 courses.

Translation, sight reading, composition, grammar, oral exercises. One section of German 4 will be offered for those who are especially interested in science, provided the teaching force of the department is not already fully occupied. *Five hours a week, every quarter.* Professor Metzenthin; Messrs. Spann, Coenen.

21. INTRODUCTION TO GERMAN LITERATURE. Prerequisite, German 3-4. Credit: 1 course.

The classical period. Reading in Lessing, Goethe, and Schiller. *Five hours a week, every quarter.* Professor Brown; Mr. Spann.

22. GERMAN LITERATURE OF THE NINETEENTH CENTURY. Prerequisite, German 21. Credit: 1 course.

Wide reading from the best authors. *Five hours a week, every quarter.* Professor Brown.

* Deceased.

51. *PRACTICE IN WRITING AND SPEAKING GERMAN. Prerequisite, German 21. Credit: 1 course.
Five hours a week, spring quarter. Professor Brown or an Instructor.

Courses for Graduates and Advanced Undergraduates

101-102. *GOETHE. Prerequisite, German 21. This course may be elected only after consultation with the instructor. Credit: 2 courses.
Study of his life. Reading and interpretation of representative works. Lectures and reports. *Five hours a week, two quarters on application.* Professor Brown.

103-104. *GOETHE'S FAUST. Prerequisite, German 21. This course may be elected only after consultation with the instructor. Credit: 2 courses.
Goethe: *Faust,* Parts I and II. *Five hours a week, two quarters on application. As a graduate course, it may be completed in one quarter.* Professor Brown.

111. *GERMAN DRAMA IN THE NINETEENTH CENTURY. Prerequisite, six courses in German. Credit: 1 course.
Kleist, Grillparzer, Hebbel, Ludwig, Hauptmann. Reading, lectures, reports. *Five hours a week, one quarter on application.* Professor Brown.

121, 122. LESSING AND SCHILLER IN ENGLISH TRANSLATION. Credit: ½ course each quarter.
Their lives and works; their philosophical, theological, social, and literary views; their indebtedness to earlier literature and their influence on later thinkers and writers. Course 121 (Lessing), *three hours a week, winter quarter;* course 122 (Schiller), *three hours a week, spring quarter.* (1934-1935 and alternate years.) Professor Metzinthin.

123. GOETHE IN ENGLISH TRANSLATION. Credit: 1 course.
Study of the man, thinker, and poet in connection with the German and general European movements of thought and literature in his time. Lectures and reports. *Five hours a week, spring quarter.* (1934-1935 and alternate years.) Professor Brown.

Courses Primarily for Graduates

201. *GOTHIC. Prerequisite, six courses in German. Credit: 1 course.
Braune's *Gotische Grammatik,* or Wright's *Gothic Grammar;* select parts of Paul's *Grundriss der Germanischen Philologie.* Introduction to Germanic Philology. *Five hours a week, one quarter on application.* Professor ————.

203. *OLD HIGH GERMAN. Prerequisite, six courses in German. Credit: 1 course.
Braune's *Althochdeutsche Grammatik;* Braune's *Altochdeutsches Lesebuch. Five hours a week, one quarter on application.* Professor Metzenthin.

207. *MIDDLE HIGH GERMAN. Prerequisite, six courses in German. Credit: 1 course.
Middle High German grammar. Wide reading. *Five hours a week, one quarter on application.* Professor Brown.

211. *THE ROMANTIC SCHOOL IN GERMANY. Credit: 1 course.
Five hours a week, one quarter on application. Professor Brown.

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* NOTE: Courses 51, 101-102, 103-104, 111, 201, 203, 207, 211, 221, 223, 225, 251 will be given if they are desired by a sufficient number of students. In any case the department reserves the right to withdraw a course for which the registration is very small. Of courses 221, 223, 225, 251 only one will be given in any quarter.
Course 51 may not be counted among the prerequisites for advanced courses.

221. *INTRODUCTION TO COMPARATIVE PHILOLOGY. Prerequisite, one classical and one modern foreign language. This course may be elected only after consultation with the instructor. Credit: 1 course.

Theories of the origin and development of human speech. Classification and history of languages. Specimens of primitive (American Indian) languages. Peculiarities of the Semitic branch (Hebrew). The Indo-European family. Linguistic history and geography of Europe. *Five hours a week, one quarter on application.* Professor Metzenthin.

223. *GERMAN PHILOLOGY. Prerequisite, advanced English and German. Credit: 1 course.

After a survey of the Indo-European family of languages the pre-historic, primitive Germanic language is explained and from it, as their source the various Germanic dialects are traced and their historical developments discussed. An introduction to the reading and interpretation of Germanic manuscripts will be given. Seminar course. Credit will be given only for research work of scholarly character. *Five hours a week, one quarter on application.* Professor Metzenthin.

225. *OLD SAXON. Credit: 1 course.

Introduction to the grammar and syntax of the Old Saxon dialect. Comparison with Gothic, Old High German, and Old English. Study of "Heliand" and "Genesis" as well as of the minor Low German prose documents of the 9th and 10th centuries, based on Otto Basler, *Altsachsisch* (Frieburg, 1923). *Five hours a week, one quarter on application.* Professor Metzenthin.

251. *HISTORY OF GERMAN LITERATURE FROM 1500 TO 1750. Credit: 1 course.

Stress is laid on the religious (polemic, lyric) literature of the German reformation in the 16th century, with Luther as the spiritual center and as the founder of the modern German language; on the overwhelming influence of foreign literature during the 17th century; and on the reaction in the first half of the 18th century. *Five hours a week, one quarter on application.* Professor Metzenthin.

DEPARTMENT OF HISTORY AND GOVERNMENT

Professors Connor, Hamilton, Wagstaff, Pierson, Woodhouse, Garrett, Caldwell, MacKinney; Associate Professor Frazer, Assistant Professors Jenkins, Crittenden, Robson; Instructors Russell, Johnson, Britt, Pegg; Teaching Fellows Grimes, Pfaff, Sitterson.

†HISTORY

Courses for Undergraduates

1-2-3. FOUNDATIONS OF MODERN HISTORY. Credit: 1½ courses.

A general course dealing with the fundamental factors in modern civilization in Europe and the United States. The emphasis of the course will rest upon the commercial revolution, European expansion, the Protestant Revolt, colonial and dynastic rivalry, the Old Regime, the French Revolution, the Industrial Revolution, the rise of democracy, the growth of modern imperialism, and the course of modern international relations. Textbooks and readings.

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* Note: Courses 51, 101-102, 103-104, 111, 201, 203, 207, 211, 221, 223, 225, 251 will be given if they are desired by a sufficient number of students. In any case the department reserves the right to withdraw a course for which the registration is very small. Of courses 221, 223, 225, 251 only one will be given in any quarter.

† See footnote on page 128 concerning majors.

Three hours a week, every quarter. Professors Garrett, MacKinney, Crittenden; Messrs. Pegg, Russell, Johnson, Britt.

Note. History 1-2-3 or the equivalent are prerequisite to all other courses in this department.

*12. AMERICAN BIOGRAPHY. Credit: 1 course.

A general survey of the lives of a selected group of distinguished Americans and a study of their influence upon the history of the United States. Lectures, readings, and reports. *Five hours a week, spring quarter.* Professor Jackson.

41-42. ANCIENT AND MEDIEVAL HISTORY: GENERAL COURSE. Credit: 2 courses.

A course dealing with the history of civilization from its beginnings to 1500 A.D. The first half of the course is devoted to the Orient, Greece, and Rome to the time of Constantine; the second half, to Western Europe in particular, from the time of Rome's decline to the age of the Renaissance and Reformation. Special attention will be paid to social and economic conditions and cultural and religious developments. *Five hours a week, winter and spring quarters.* Professors Caldwell, MacKinney.

45-46. ENGLISH HISTORY: GENERAL COURSE. Credit: 2 courses.

The purpose of this course is to convey a good working knowledge of English history and broaden it into a survey of the part the Anglo-Saxon race has played in world history. Textbooks, readings, and lectures. *Five hours a week, fall and winter quarters.* Professor Wagstaff.

47-48. AMERICAN HISTORY: GENERAL COURSE. Credit: 2 courses.

A general survey of the history of the Unite States. Lectures, textbooks, and readings. *Five hours a week, fall and winter or winter and spring quarters.* Professor Crittenden.

51. THE ORIENT AND EARLY GREECE. Credit: 1 course.

An advanced course in the history of the Bronze Age in the Mediterranean, the beginning of civilization in Egypt, Babylonia, Syria and Palestine, and Crete, and the history of their development down to the time of the Persian Empire. Attention will be given to the hieroglyphics and cuneiform scripts, to economic conditions, governments and law, artistic and literary achievements, and religion. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Caldwell.

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* NOTE: Regulations as to undergraduate majors in the Department of History and Government:

1. History courses 41-49, inclusive, and Government courses 21-22, except as provided below, are not to be credited towards fulfilling the requirements of the major. History 12 and Government 17 cannot be used in meeting the requirements of a major.

2. The major in History and Government shall consist of eight approved courses; provided, however, that the Department may reduce this requirement to six, (a) in the Division of European History for students who have passed with distinction (i.e. with a grade of A or B) either History 41-42 or History 45-46; (b) in the Division of American History for students who have passed with distinction History 47-48; (c) to seven courses in the Division of Government for students who have passed with distinction either Government 21 or Government 22 and to six courses for students who have passed with distinction both of these courses.

3. For purposes of the major, the courses of the Department will be considered as having been divided into three "Divisions of Specialization:" (1) the Division of European History, (2) the Division of American History, and (3) the Division of Government.

4. Having chosen his "Division of Specialization," the student must take at least five out of his eight courses from that division, but this number may be reduced to four in the case of students who may be credited as stated above with History 41-42, History 45-46, History 47-48, and with Government 21 or Government 22. The remaining courses of his major he may elect from the other two divisions.

5. The credit allowed for reading for honors may be applied to the fulfillment of the requirements for the major.

52. GREECE: THE CLASSICAL PERIOD. Credit: 1 course.

A history of the classical period of Ancient Greece: the Homeric Age, the Expansion of the Hellas, the Renaissance of the Aegean, the Fifth and Fourth Centuries to the death of Alexander. Particular attention will be given to the growth of democracy, social and economic aspects, artistic, literary, and religious developments. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Caldwell.

53. HELLENISTIC GREECE AND THE ROMAN REPUBLIC. Credit: 1 course.

A survey of the world into which Rome entered; the political, economic, and social conditions of the Eastern Mediterranean; Hellenistic art, literature, and religion; the establishment and growth of the Roman Republic; Roman expansion throughout the Mediterranean; the growth of Roman culture; the Roman Revolution; and the foundation of the Empire. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Caldwell.

54. THE ROMAN EMPIRE. Credit: 1 course.

The history of Rome from Augustus to Constantine; the organization and administration of the Roman Empire; social, economic, and religious conditions and developments; the decline of ancient culture, and the rise of Christianity. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Caldwell.

64. EARLY MEDIEVAL EUROPE: THE "DARK" AGES, (300-1000). Credit: 1 course.

The evolution of medieval civilization from declining Rome, victorious Christianity, and migrating Germanic peoples. The "Fall" of Rome; the continuance of East Roman civilization; the rise of monasticism, the papacy, and the Frankish Empire. Karl the Great; the disintegration of his empire; renewed invasions. Government, religion, and culture during the "Dark" Ages. *Five hours a week, fall quarter.* Professor MacKinney.

65. EUROPE IN THE CRUSADING AGE (1000-1300). Credit: 1 course.

The rise of national monarchies, of chivalry, of towns, and the Church; the expansion of Europe in the Crusades and the accompanying expansion of political, economic, religious, and cultural life; the struggle between Church and State; the rise of Universities; Romanesque and Gothic architecture; literature; the climax of medieval civilization in the XII and XIII Centuries. *Five hours a week, winter quarter.* Professor MacKinney.

66. THE AGE OF THE RENAISSANCE (1250-1550). Credit: 1 course.

The evolution of modern civilization in Italy and the transalpine countries; the blending of medieval and classical elements; the political and economic background; the rise of national states and vernacular literatures; the arts; literature; humanism; education; discovery and invention. *Five hours a week, spring quarter.* Professor MacKinney.

85. ECONOMIC HISTORY OF THE NINETEENTH CENTURY. Open only to students in the School of Engineering. Credit: 1 course.

A course dealing with the economic materials, institutions, and influences in the history of the modern world, with special emphasis on European nations and the United States. *Five hours a week, spring quarter.* Professor Garrett.

91. THE UNITED STATES AND LATIN AMERICA. Credit: 1 course.

A course concerned with the diplomatic relations developed between the states of the Western Hemisphere from 1810 to the present. The chief interest will be in the relations of the United States and the Latin American countries. In the course such topics will be treated as the problems of recognition, the

Monroe Doctrine, expansion, intervention, "headship" of the United States, Pan-Americanism, arbitration, trade and cultural relations. Lectures, readings, and reports. *Five hours a week, spring quarter.* Professor Robson.

Courses for Graduates and Advanced Undergraduates

101. PERIOD STUDIES IN GREEK HISTORY. Credit: 1 course.
This course will be devoted to an intensive study of the sources, literature and historical problems of a selected period of Greek History. For the year 1933-1934 attention will be directed to the history of the Greek World between 750 B. C. and 500 B. C. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Caldwell.

102. PERIOD STUDIES IN ROMAN HISTORY. Credit: 1 course.
A course in a selected period of Roman History, given for the same class of students and under the same conditions as History 101. The period to be treated in 1934-1935 will be the Age of the Flavian and Antonine emperors. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Caldwell.

121. MEDIEVAL CIVILIZATION. Credit: 1 course.
An intensive study of the classical cultural heritage of the Middle Ages; medieval "revivals" of learning during the eras of Theodoric the "Civilizer," Charlemagne, Alfred, Otto I, and the eleventh-twelfth centuries; the problem of the cultural "Dark Age" and "Renaissance"; the evolution of medieval culture; ecclesiastical and secular architecture; sculpture and painting; the literature of the clergy, nobility, and common folk; historical writing, science, philosophy; the development of schools and universities; music. Lectures, library reading, and reports. (1935-1936 and alternate years.) *Five hours a Week, winter quarter.* Professor MacKinney.

122. SOCIAL-ECONOMIC HISTORY OF THE MIDDLE AGES. Credit: 1 course.
An intensive study of the social and economic life of the medieval clergy, nobility, city folk, and peasantry; agricultural life and the development of the manorial system; industrial life and the rise of craft guilds; local and distant commerce; fairs, trade-routes, and the development of business technique; merchant guilds and leagues; the influence on social-economic life of the decline of Rome, the coming of the Teutons, the Church, the Crusades, and voyages of discovery. Lectures, library reading, and reports. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor MacKinney.

131. THE PROTESTANT REVOLT. Credit: 1 course.
An intensive study of religious, political, intellectual, and economic conditions on the eve of the Protestant Revolt, of the movements led by Luther, Zwingli, Calvin, Knox, and Henry VIII, and of the Catholic Reformation. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Garrett.

132. THE RISE OF ABSOLUTISM IN EUROPE. Credit: 1 course.
A detailed study of the Thirty Years War, France under Henry IV, Richelieu, Mazarin, and Louis XIV, the rise of Prussia, Sweden from Gustavus Adolphus to the death of Charles XIII, the decline of Poland and Turkey, and the development of Russia to the death of Peter the Great. (1934-1935 and atlernate years.) *Five hours a week, spring quarter.* Professor Garrett.

133. THE FRENCH REVOLUTION. Credit: 1 course.
An intensive study of the causes, events, and results of the French Revolution. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Garrett.

134. THE NAPOLEONIC PERIOD. Credit: 1 course.
A detailed study of the chief events and movements of the Napolenic period. Particular attention will be paid to the immediate effects of the period on the states surrounding France and to the permanent results of the period in Europe. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Garrett.

135. RISE OF DEMOCRACY AND NATIONALISM IN MODERN EUROPE. Credit: 1 course.
An intensive study of the period of restoration and reaction, the revoutions of 1830 and 1848, the rise of socialism, the unification of Italy and of Germany, France under Louis Phillippe, the Second French Republic, and Napoleon III. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Garrett.

136. RECENT AND CONTEMPORARY EUROPEAN HISTORY. Credit: 1 course.
A study of the recent history of France, Germany, Italy, Austria-Hungary, and Russia, the causes of the Great War, the chief events of the war, the treaties of peace, the attempts to organize the world after the war, and recent movements in Europe. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Garrett.

137. ENGLAND IN THE NINETEENTH CENTURY. Credit: 1 course.
The purpose of this course is to effect an intensive treatment of a relatively short period of English history, that from 1815 to 1915. The course will develop England's national and imperial story, her international relations, and her contributions to the history of the age. Lectures and readings. *Five hours a week, spring quarter.* Professor Wagstaff.

149 (81). THE AMERICAN COLONIES, 1606-1689. Credit: 1 course.
A general survey of the European background of American society and institutions and the rival territorial claims of the colonizing nations, followed by an intensive study of the influences and motives behind English colonization in America, the founding of England's continental colonies, their political, social, and economic development, and their relations to each other and to the British Empire as a whole. Lectures, readings, and reports. *Five hours a week, fall quarter.* Professor Connor.

150 (82). THE AMERICAN COLONIES, 1689-1783. Credit: 1 course.
A general survey of the colonies as a whole at the opening of the eighteenth century, followed by an intensive study of their social, economic, and political development, immigration, conquest, and westward expansion; their imperial relations and part in international rivalries; constitutional controversies and development of colonial self-government; intercolonial relations, revolution and independence; Federal relations and the formation of the American Union. Lectures, readings, and reports. *Five hours a week, winter quarter.* Professor Connor.

151. THE FEDERAL PERIOD (1783-1815). Credit: 1 course.
An intensive study is made of the government under the Articles of Confederation, the formation and adoption of the Federal Constitution, the launching of the government, Jeffersonian democracy, the westward movement, and the Second War for Independence. Lectures, readings, and reports. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Crittenden.

152. THE ANTE-BELLUM PERIOD (1815-1860). Credit: 1 course.
A social, economic, and political study of the period—the westward movement, states' rights philosophy, Jacksonian democracy, development of Nationalism, controversy over negro slavery, the rise of Southern Rights, and

the causes of the war for Southern Independence. Lectures, readings, and reports. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Crittenden.

153. SECESSION AND CIVIL WAR. Credit: 1 course.

Beginning with a rapid survey of the states' rights theory and of the secession movement before 1860, the course deals with the important constitutional, political, and economic aspects of the Civil War in the United States. Lectures, readings, and reports. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Hamilton.

154. THE RECONSTRUCTION PERIOD. Credit: 1 course.

A course dealing with the constitutional, political, social, and economic aspects of the period from the close of the Civil War in 1865 to the restoration of home rule in the South in 1877. Lectures, readings, and reports. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Hamilton.

155. RECENT AMERICAN HISTORY, 1876-1898. Credit: 1 course.

In this course emphasis will be placed upon the influence of the Civil War and Reconstruction upon subsequent American history; the war amendments in theory and practice; business and politics; the Granger movement; the currency question; the tariff legislation; the trust problem; foreign relations; the Spanish-American War and its results; party politics; political dissent; and interpretation of democracy. Lectures, textbooks, and readings. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Pierson.

156. RECENT AMERICAN HISTORY, 1898-1920. Credit: 1 course.

Continuation of History 155. A course dealing with the political, economic, social, and diplomatic history of the United States from 1898 to 1920. Conservatism, moderation, and radicalism in politics and economics; social legislation; American imperialism and increased participation in international relations; the World War; and the problems of peace. Lectures, textbooks, and readings. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Pierson.

161. NORTH CAROLINA, 1663-1789. Credit: 1 course.

General survey of the settlement of North Carolina and its territorial expansion; the origin and development of its political institutions; the influences affecting its growth and development; immigration and the development of social and economic life; political and constitutional controversies; intercolonial and imperial relations; revolution and independence; the adoption of a constitution and organization of the state government; Federal relations and formation of the Federal Union. Lectures, readings, and reports. *Five hours a week, fall quarter.* Professor Connor.

162. NORTH CAROLINA, 1789-1900. Credit: 1 course.

General survey of conditions at the close of the 18th century; origin and development of political parties; sectional controversies; political and constitutional development; education, internal improvements, and railroads; Federal relations; the slavery controversy; secession, civil war, and reconstruction; restoration of home rule; the rise of populism; the era of fusion; "white supremacy"; recent political, educational, and industrial development. Lectures, readings, and reports. *Five hours a week, winter quarter.* Professor Connor.

163. THE SOUTH, 1789-1860. Credit: 1 course.

A course dealing with the Southern States in the period preceding the Civil War, in which emphasis will be laid upon social, economic, and political organization and movements. Lectures, readings, and reports. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Hamilton.

164. THE SOUTH, 1877-1925. Credit: 1 course.

A course which deals with the economic, social, and political development of the Southern States since the close of Reconstruction. Emphasis will be laid upon the rise of industry in the South and its results. Lectures, readings, and reports. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Hamilton.

167. ECONOMIC HISTORY OF THE UNITED STATES, 1783-1860. Credit: 1 course.

A study of agriculture, transportation, commerce, manufacturing, and similar aspects of American history, 1783-1860. The influence of economic factors upon social and political life will be discussed. Lectures, readings, and reports. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Crittenden.

168. ECONOMIC HISTORY OF THE UNITED STATES, 1860-1925. Credit: 1 course.

A particular effort will be made to show the effects upon American life of the great economic revolution which has occurred since the Civil War. Lectures, readings, and reports. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Crittenden.

170. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES. (Education 143.) Credit: 1 course.

The social and educational institutions and practices of the United States are traced through: (a) The period of transplanting of European institutions; (b) the period of modifications of institutional life to meet new conditions; and (c) the period of development of a social and an educational system of free common schools, high schools, and higher and technical education in harmony with the political and social ideals and institutions of America. Textbook, lectures, investigations, and reports. *Five hours a week, fall or spring quarter.* Professor Knight.

Courses for Graduates

201ab. HISTORIOGRAPHY. Credit: 1 course.

Lectures, conferences, readings, and reports. The first quarter will be concerned with methods of research, schools of interpretation, and the interrelation of history with the other social sciences. The second quarter will be a seminar in the history and bibliography of history. Required of all graduate students in history and government. *Three hours a week, fall and winter quarters.* Professor Caldwell.

211. THE ENGLISH BACKGROUND OF THE AMERICAN REVOLUTION. Credit: 1 course.

A survey of England's eighteenth century political, social, and economic conditions and their relations to the American Revolution. Lectures and reports. *Five hours a week, fall quarter.* Professor Wagstaff.

220. PRELIMINARIES OF THE AMERICAN REVOLUTION. Credit: 1 course.

A study of the background and causes of the American Revolution. Lectures and reports. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Connor.

221. THE WAR OF AMERICAN INDEPENDENCE. Credit: 1 course.

A study of its political, social, and economic aspects. Lectures, readings, and reports. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Connor.

271. HISPANIC-AMERICAN HISTORY: The Colonial Period and the Wars of Independence. Credit: 1 course.

In this course a general survey will be made of Spanish and Portuguese America from the establishment of colonial settlements through the wars of independence. A study of the transplantation of Hispanic civilization in language, customs, religion, trade, and political institutions; Indian relations; labor and social conditions; education and industry; the causes and events of the struggles for independence. Lectures and readings. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Pierson.

272. HISPANIC-AMERICAN HISTORY: Development of Nationality in South America. Credit: 1 course.

The modern history of Argentina, Brazil, Chile, Uruguay, Paraguay, Peru, Bolivia, and Eucador. Attention will be directed to the establishment of these republics, the evolution of their political theory; the struggle for political stability, the exploitation of resources, the diplomatic and commercial relations with the United States and Europe, the international problems of South America, the contemporary progress in politics and society. Lectures and readings. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Pierson.

273. HISPANIC-AMERICAN HISTORY: Hispanic North America and the Caribbean Countries. Credit: 1 course.

Emphasis in this course will be placed upon the same general factors as in History 272. The diplomatic and commercial relations of the United States and Mexico, the insular republics, the Central American countries, and Colombia, Panama, and Venezuela will receive special attention. Lectures and readings. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Pierson.

301abc. ANCIENT HISTORY. Credit: 1½ courses.

A seminar in some phase of ancient history. *Conference, one hour a week, Fall, winter, and spring quarters.* Professor Caldwell.

311abc. MEDIEVAL HISTORY. Credit: 1½ courses.

A seminar in some phase of the medieval social history. *Conference, one hour a week, fall, winter, and spring quarters.* Professor MacKinney.

321abc. MODERN EUROPEAN HISTORY. Credit: 1½ courses.

A seminar in some phase of the Napoleonic period. *Conference, one hour a week, fall, winter, and spring quarters.* Professor Garrett .

323abc. ENGLISH HISTORY. Credit: 1½ courses.

A seminar in some selected phase. *Conference and reports, one hour a week, fall, winter, and spring quarters.* Professor Wagstaff.

331abc. AMERICAN COLONIAL HISTORY. Credit: 1½ courses.

A seminar in some selected phase. *Conference and reports, one hour a week, fall, winter, and spring quarters.* Professor Connor.

333abc. HISTORY OF THE UNITED STATES, 1783-1860. Credit: 1½ courses.

A seminar in some phase of the history of the United States, 1783-1860. *Conference, one hour a week, fall, winter, and spring quarters.* Professor _____.

341. SEMINAR COURSE. Credit: 1 course.

A research course in a special field under the direction of a member of the department.

370abc. HISTORY OF THE UNITED STATES. Credit: 1½ courses.

A seminar in some selected phase. *Conference and reports, one hour a week, fall, winter, and spring quarters.* Professor Pierson.

*GOVERNMENT

Courses for Undergraduates

17. INTRODUCTION TO POLITICAL SCIENCE. Credit: 1 course.
An historical and analytical survey of the concepts and principles of political science; examination of present-day political problems and programs against this background of systematic thought. Lectures and readings. *Five hours a week, winter quarter.* Professor Robson.

21. THE GOVERNMENT OF THE UNITED STATES. Credit: 1 course.
A general course dealing with the national government of the United States. Attention will be directed to the constitutional basis, the historical development, and the practical organization and operation of the institutions established for administering national affairs. Textbooks, lectures, discussions, and readings. *Five hours a week, each quarter.* Professors Frazer, Robson, Jenkins.

22. THE GOVERNMENTS OF EUROPE. Credit: 1 course.
It is the purpose of this course to study the operation of the constitutional systems of the principal European governments. Emphasis is placed upon the governments of England and France. Textbooks, lectures, readings. *Five hours a week, winter or spring quarter.* Professor Robson.

Courses for Graduates and Advanced Undergraduates

121. THE GOVERNMENT OF ENGLAND. Credit: 1 course.
The objective in this course is a knowledge of the development and operation of the English government. Local, national, and imperial aspects of England's governmental practice will receive attention. Resemblances and contrasts between her government and that of our own country will be pointed out for the practical lessons which the parallel supplies. Lectures and readings. *Five hours a week, spring quarter.* Professor Wagstaff.

122. GOVERNMENT AND ADMINISTRATION OF EUROPEAN CITIES. Credit: 1 course.
A general consideration of principles and methods of social control in the municipalities of Great Britain, France, and Germany, with some attention to those of other nations. Comparisons with American conditions. *Five hours a week, spring quarter.* Professor Woodhouse.

131. AMERICAN STATE GOVERNMENT. Credit: 1 course.
A study in the principles, organization, and administrative methods of state government. In connection with the course will be a special study of the government of North Carolina. Lectures, readings, and reports. *Five hours a week, fall or spring quarter.* Professor Jenkins.

132. AMERICAN MUNICIPAL GOVERNMENT. Credit: 1 course.
An historical survey of the development of governmental structure, theory, and functions in American municipalities, and careful analysis of existing municipal conditions, with special attention to city and town government in North Carolina. Each student will make an intensive study of his own or of some other city or town. *Five hours a week, fall quarter.* Professor Woodhouse.

133. AMERICAN MUNICIPAL ADMINISTRATION. Credit: 1 course.
Special study of the principles and problems of administration in American municipal corporations, of such functions as police, public education, charities and correction, local improvements, public health, finances, with emphasis on

* For the regulations governing the undergraduate major in Government see page 128, note.

city and town administration in North Carolina. Each student will select and study exhaustively a municipal problem in one municipality. *Five hours a week, fall quarter.* Professor Woodhouse.

134. COUNTY GOVERNMENT AND ADMINISTRATION. (Same as Rural Economics 134.) Credit: 1 course.

A study of the forms of organization, the functions, and the operation of County Government in the United States and especially in North Carolina in their historical development, but with special emphasis on present conditions and tendencies and on possible improvements. Each student will be required to study, as extensively and as intensively as possible, the government and administration of one county, preferably his home county, and to put his results into essay form. Textbooks, lectures, and readings. *Five hours a week, winter quarter.* Professor Wager.

141. INTERNATIONAL LAW. Credit: 1 course.

A study will be made of the rules observed by the states of the world concerning their relations in peace and in war. Lectures and the preparation of typical cases by the students. *Five hours a week, fall quarter.* Professor Frazer.

142. INTERNATIONAL RELATIONS. Credit: 1 course.

The problems of nationalism and internationalism, of imperialism, and the settlement of international conflicts will be considered in this course. It is designed to introduce the student to the basic facts of world politics. Lectures, readings, and reports. *Five hours a week, winter quarter.* Professor Frazer.

143. AMERICAN DIPLOMACY. Credit: 1 course.

This course will be concerned with a survey of the diplomatic relations of the United States from the period of the American Revolution to the World War. Particular attention will be directed to the development of American foreign policies and American contributions to International Public Law. Lectures and reports. *Five hours a week, spring quarter.* Professor Frazer.

151. THE ELEMENTS OF POLITICAL SCIENCE. Credit: 1 course.

A general course in which a study is made of the principles of political science and of the important theories respecting the nature, origin, forms, and ends of the state and of government. An examination of the literature of the subject will be made, supplemented by students' reports on selected political theorists. Lectures, textbooks, and readings. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Pierson.

153. POLITICAL THOUGHT OF THE EIGHTEENTH CENTURY. Credit: 1 course.

An analysis of political thought and philosophy, 1750-1800. Emphasis will be placed on the study of the philosophical ideas of the American and French Revolutions. Lectures and reports. *Five hours a week, fall quarter.* Professor Robson.

154. DEVELOPMENT OF THE ENGLISH CONSTITUTION. Credit: 1 course.

A general course surveying the origin and development of the constitutional machinery of the British monarchy. Emphasis will be laid on the successive constitutional landmarks from the Norman Conquest to the Parliament Act of 1911. Lectures, textbooks, and readings. *Five hours a week, winter quarter.* Professor Wagstaff.

155. THE CONSTITUTION OF THE UNITED STATES. Credit: 1 course.

An elementary course in constitutional law covering by means of lectures, textbooks, and cases the fundamental principles of constitutional interpretation and practice in the United States. *Five hours a week, winter quarter.* Professor Jenkins.

156. CONTEMPORARY PROBLEMS IN GOVERNMENT. Credit: 1 course.

A study of the present organizations and actual operations of our national and state governments through the day to day acts of their departments as reported in the *United States Daily,* other newspapers, periodicals, and available official reports. Lectures, readings, and reports. *Five hours a week, winter quarter.* Professor Woodhouse.

157 (152). HISTORICAL JURISPRUDENCE. Credit: 1 course.

Ancient and mediaeval law; brief study of Egyptian, Babylonian, Greek, and Hebrew law, chiefly in their methods and agencies of formulation and administration; detailed study of the historical evolution of Roman law, of its fate during the Middle Ages, and of its spread and influence in the Modern World; some consideration of the parts played in medieval Europe by the Germanic, Slavonian, and Celtic legal systems. *Five hours a week, winter quarter.* Professor Woodhouse.

158 ((152). HISTORICAL JURISPRUDENCE. Credit: 1 course.

Anglo-American law; historical study of the development of English law, legislation, courts, and court procedure from the Anglo-Saxon Conquest of England to the settlements in North America by the English; and of the evolution of the legal system in these English colonies and in the United States to the present day. *Five hours a week, spring quarter.* Professor Woodhouse.

Courses Primarily for Graduates

301abc. MODERN INTERNATIONAL RELATIONS. Credit: 1½ courses.

Seminar. An analysis will be made of the major problems of international relations. Emphasis will be placed upon the elements of nationalism and internationalism, imperalism, and the settlement of international disputes. *Conferences, two hours a week, fall, winter, and spring quarters.* Professor Frazer.

305. SEMINAR IN COUNTY ADMINISTRATION. (Same as Rural Social Economics 305.) Prerequisite, Government 134, or two other courses in Government. Credit: 1 course.

Research, reading, and conferences on special phases of county organization and administration. *Five hours a week, fall, winter, or spring quarter.* Professor Wager.

311abc. AMERICAN POLITICAL THEORY. Credit: 2 courses.

A seminar course respecting the political philosophy that has been developed in the United States. In the fall quarter the political theory of the colonial period and the American Revolution will be studied; in the winter quarter attention will be given to the theories associated with the formation of the Constitution and its early interpretation, the nature of the Union, and the slavery dispute; in the spring quarter the political theory of the Civil War and the contemporary United States will be considered. Lectures, readings, and reports. *Conferences, two hours a week, fall, winter, and spring quarters.* Professor Pierson.

321abc. STATE AND LOCAL GOVERNMENT. Credit: 1½ courses.

Seminar course respecting the various functions, organs, and problems of public administration in the States and in their sub-divisions. Comparison of various attempts to reorganize the state administrative systems. *Conferences, two hours a week, fall, winter, and spring quarters.* Professor Woodhouse.

341. SEMINAR COURSE. Credit: 1 course.

A research course in a special field under the direction of a member of the department.

DEPARTMENT OF JOURNALISM

PROFESSOR COFFIN

30. COLLEGE REPORTING. Credit: ½ or 1 course.
A course with a maximum credit of one full course for reporting done on the student daily under the supervision of the Department of Journalism.

31. COLLEGE EDITING. Credit: ½ or 1 course.
A similar credit course for those who do the editorial work of the student newspaper.

53. NEWS WRITING. Credit: 1 course.
A course in elementary news writing devoted to practical work in the classroom. Prerequisite for Journalism 54. *Five hours a week, fall quarter. Laboratory fee, $2.00.* Professor Coffin.

54. NEWS WRITING. Prerequisite, Journalism 53 or the equivalent. Credit: 1 course.
A continuation of the work in Journalism 53, with the addition of some copy-reading. Prerequisite for Journalism 55. *Five hours a week, winter quarter. Laboratory fee, $2.00.* Professor Coffin.

55. NEWS WRITING. Prerequisite, Journalism 53 and 54. Credit: 1 course.
A continuation of Journalism 54, with more emphasis on assignments. *Five hours a week, spring quarter. Laboratory fee, $2.00.* Professor Coffin.

56ab. FEATURE WRITING. Credit: ½ course each quarter.
A course for advanced students in the production of feature stories and feature articles, with a view to making them marketable. Either half may be taken independently. *Three hours a week, winter and spring quarters.* Professor Coffin.

57. NEWS METHODS AND TREATMENTS. Credit: ½ course.
A study of contemporary newspapers and of prevailing methods of handling news. Desk work. *Three hours a week, fall quarter.* Professor Coffin.

58. EDITORIAL WRITING. Credit: ½ course.
Comparative examination of policies and relations. Editorial writing. *Three hours a week, spring quarter.* Professor Coffin.

59. WEEKLY NEWSPAPER EDITING. Credit: ½ course.
A study of the functions of the weekly newspaper, with practical instruction in meeting the problems of the neighborhood news medium. *Three hours a week, winter or spring quarter.* Professor Coffin.

DEPARTMENT OF LIBRARY SCIENCE

Professor AKERS; Associate Professor DOWNS; Assistant Professors BEUST, KELLING.

Courses for Undergraduates

Courses 61, 111, 121, 151 may be taken by Liberal Arts students of senior standing with the approval of the director of the School of Library Science. Course 155 is open to students in the School of Commerce with the approval of its Administrative Board and of the Director of the School of Library Science.

For full descriptions of the courses listed below see under The School of Library Science in Part Five.

61. THE USE OF BOOKS AND LIBRARIES. Credit: 1 course.
Five hours a week, winter quarter. Professor Downs.

111. REFERENCE AND BIBLIOGRAPHY. Credit: 1 course.
Five hours a week, fall quarter. Professor Kelling.

121. PRINCIPLES OF BOOK SELECTION. Credit: 1 course.
Five hours a week, fall quarter. Professor Beust.

151. HISTORY OF BOOKS AND LIBRARIES. Credit: 1 course.
Five hours a week, spring quarter. Professor Downs.

155. ORGANIZATION OF SPECIAL COLLECTIONS. Credit: ½ course.
Three hours a week, spring quarter. Professor Akers.

DEPARTMENT OF MATHEMATICS

Professors HENDERSON, LASLEY, HOBBS, BROWNE; Associate Professors WINSOR, MACKIE, LINKER; Assistant Professors HILL, HOYLE, GARNER; Instructors CAMERON, GARRETT; Teaching Fellows NAHIKIAN, PALMERLEE.

Courses for Undergraduates

1-2. INTRODUCTORY MATHEMATICS. Required for Freshmen. Credit: 2 courses.

PART 1. A systematic development of the notion of algebraic functions: linear functions, quadratic functions, and functions of higher degree. The rate of change of functions. Functions changing at a given rate.

PART 2. A continuation of the development of the function idea, extending the notion so as to include transcendental functions such as the exponential and logarithmic functions, trigonometric functions, and the applications of the latter to the solution of triangles. *Five hours a week, each course every quarter.* Professors Henderson, Lasley, Hobbs, Browne, Winsor, Mackie, Linker, Hill, Hoyle, Garner; Messrs. Cameron, Garrett, Nahikian, Palmerlee.

1E. PLANE AND SPHERICAL TRIGONOMETRY. Required of Freshmen in Engineering Courses. Credit: 1 course.

Solution of right and oblique triangles, both plane and spherical, with numerous exercises drawn from the field of Engineering. *Six hours a week, fall quarter.* Professors Winsor, Linker, Hill, Garner; Mr. Garrett.

2E. COLLEGE ALGEBRA. Required of Freshmen in Engineering Courses. Credit: 1 course.

Standard course in College Algebra including such topics as graphical representation of equations, introduction to the Theory of Equations, Complex numbers, Determinants and infinite series. *Six hours a week, winter quarter.* Professors Winsor, Linker, Hill.

3E. ANALYTIC GEOMETRY. Required of Freshmen in Engineering Courses. Credit: 1 course.

A treatment of the straight line, circle, conic sections, special plane curves, transformation of coördinates. *Five hours a week, spring quarter.* Professors Hobbs, Winsor, Linker, Hill.

13. ANALYTIC GEOMETRY. Prerequisite, Mathematics 1-2. Credit: 1 course.

A course in the fundamentals of analytical geometry; the straight line, circle, parabola, ellipse, hyperbola, higher plane curves, transformtaions of coördinates, geometry of space. *Five hours a week, every quarter.* Professors Mackie, Hoyle, Garner; Mr. Cameron.

24. DIFFERENTIAL CALCULUS. Prerequisite, Mathematics 1-2 and 13. Credit: 1 course.

A study of the differentiation process and its application to geometry, physics, and mechanics, including the notions of curvature, partial differentiation, envelopes, series, expansion of functions, etc. *Five hours a week, every quarter.* Professors Hoyle, Garner; Mr. Cameron.

24E. CALCULUS I FOR ENGINEERING STUDENTS. Required of Sophomores in Engineering Courses. Prerequisite, Mathematics 13 or 3E. Credit: 1 course.

A study of the derivative and its applications to geometry and mechanics, expansion of functions, partial differentiation. *Six hours a week, fall quarter.* Professors Winsor, Linker, Hill.

25. INTEGRAL CALCULUS. Prerequisite, Mathematics 24. Credit: 1 course.

This course centers around the idea of the definite integral, considering in detail problems arising in geometry and the physical sciences, including length of curves, areas, volumes, moment of inertia, etc. *Five hours a week, every quarter.* Professors Hoyle, Garner; Mr. Cameron.

25E. CALCULUS II FOR ENGINEERING STUDENTS. Required of Sophomores in Engineering Courses. Prerequisite, Mathematics 24E. Credit: 1 course.

The definite integral and its applications. *Six hours a week, winter quarter.* Professors Winsor, Linker, Hill.

26E. CALCULUS III FOR ENGINEERING STUDENTS. Required of Sophomores in Engineering Courses. Prerequisite, Mathematics 25E. Credit: 1 course.

Engineering problems involving the calculus, together with an elementary treatment of differential equations. *Six hours a week, spring quarter.* Professors Winsor, Linker, Hill.

Courses for Graduates and Advanced Undergraduates

103. INTRODUCTION TO HIGHER GEOMETRY. Prerequisite, Mathematics 25. Credit: 1 course.

This is a teacher's course for graduate credit, especially devised for teachers who are candidates for the A.M. degree. The course deals with the properties of the triangle and circle from the modern point of view, poles and polars, harmonic division, transformation by reciprocal radii, Brocard points and circles, etc. *Five hours a week, fall or spring quarter.* Professor Winsor.

104. INTRODUCTION TO ADVANCED ALGEBRA. Prerequisite Mathematics 25. Credit: 1 course.

This course supplements Mathematics 103. It is designed especially for teachers, and serves to bridge the gap between elementary algebra and Mathematics 246. Selected topics in advanced algebra, including such subjcts as linear and quadratic forms, limits and series, complex numbers, elementary groups, ets. *Five hours a week, winter quarter.* Professor Winsor.

111. ELEMENTARY MATHEMATICAL STATISTICS. Prerequisite, Mathematics 25 or equivalent. Credit: 1 course.

A course dealing with the elementary theory and applications of mathematical statistics, treating in detail the following topics: graphs, averages, dispersion, skewness, sampling, probable error, frequency curves and correlation. The course is designed to serve as a background for students dealing with statistical and observational data. *Five hours a week, spring quarter.* Professor Hill.

121. THEORETICAL MECHANICS. Credit: 1 course.

An introductory course in mechanics employing the methods of the calculus. *Five hours a week, spring quarter.* Professor Linker.

131. THEORY OF EQUATIONS. Prerequisite, Mathematics 25. Credit: 1 course.

Indispensable for students intending to prosecute studies in the higher branches of pure mathematics. Such subjects as the solution of equations of higher degree, transformations, determinants, elimination, invariants and covariants, and symmetric functions are treated in detail. The student is afforded a survey of the general problem and the basic principles of the formation, handling, and evolution of equations. *Five hours a week, winter quarter.* Professor Henderson.

141. DIFFERENTIAL EQUATIONS. Prerequisite, Mathematics 24 and 25, or 24E and 25E. Credit: 1 course.

This is a course both for students intending to specialize in mathematics and for students in advanced engineering, civil, electrical, and chemical. Among the subjects treated are singular solutions, applications to mechanics, geometry, and physics, linear equations with both constant and variable coefficients, equations involving more than two variables, partial differential equations, and spatial forms. *Five hours a week, fall quarter.* Professor Henderson.

151. PROJECTIVE HOMOGENEOUS COÖRDINATES AND THEIR APPLICATIONS. Prerequisite, Mathematics 25. Credit: 1 course.

A study of the general homogeneous coördinates of forms of one, two, three, and four dimensions; cross ratio and its properties; ideal elements; duality; projective correspondence; transformation of coördinates; the elements of line geometry. *Five hours a week, fall quarter.* Professor Lasley.

152. ANALYTIC PROJECTIVE GEOMETRY. Prerequisite, Mathematics 151. Credit: 1 course.

The projective theory of binary forms; the conic as a rational curve; the conic as a ternary form; the conic from the viewpoint of the theory of correlations; functional determinants and invariants; selected topics from higher geometry. *Five hours a week, winter quarter.* Professor Lasley.

161. ANALYTIC GEOMETRY OF SPACE. Prerequisite, Mathematics 25. Credit: 1 course.

Spatial relations are treated from the analytic standpoint. Deals with quadric surfaces, envelopes, foci, quadriplanar and tetrahedral coördinates, developable surfaces, curves in space, curvature of surfaces, higher surfaces, etc. *Five hours a week, spring quarter.* Professor Browne.

171. ADVANCED CALCULUS. Prerequisite, Mathematics 25. Credit: 1 course.

This course completes and rounds out the subject as given in Mathematics 25 Stress upon rigor in demonstration. Designed to meet the particular needs of the class, e.g., problem course on study of special functions. Thorough knowledge of calculus is the aim of the course. *Five hours a week, spring quarter.* Professor Mackie.

Courses Primarily for Graduates

206. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. Prerequisite, Mathematics 131, 141, and 171. Credit: 1 course.

Complex numbers, differentiation and integration, conformal mapping, linear fractional transformations, single and multiple valued functions. *Five hours a week, winter quarter.* Professor Mackie.

211. VECTOR ANALYSIS. Prerequisite, Mathematics 121, 141, and 161, or equivalent. Credit: 1 course.

A study of Vector Analysis with applications to Mechanics, Physics, and Geometry. *Five hours a week, winter quarter.* Professor Hobbs.

216. DYNAMICS. Prerequisite, Mathematics 211. Credit: 1 course.

Differential equations of motion, equations of orbits, D'Alembert's principle, motion of a rigid body. *Five hours a week, spring quarter.* Professor Hobbs.

221. PARTIAL DIFFERENTIAL EQUATIONS. Prerequisite, Mathematics 141. Credit: 1 course.

An elementary treatment of partial differential equations with special emphasis upon applications. *Five hours a week, fall quarter.* Professor Hobbs.

226. FOUNDATION OF GEOMETRY. Prerequisite, Mathematics 151. Credit: 1 course.

A course designed to meet the needs of students experienced in mathematical thinking. A survey of the contributions of Pasch, Peano, Hilbert, and their school to our knowledge of the foundations of geometry; a study of the axioms, of systems of geometry, etc. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Henderson.

231. THEORY OF NUMBERS. Prerequiste, Mathematics 131. Credit: 1 course.

An elementary course in the study of the properties of the rational integers, including the study of the question of divisibility, greatest common divisor of two or more integers, solution of simple congruences, quadratic residues, quadratic reciprocity law, representation of integers by quadratic forms, equivalence of quadratic forms, etc. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Browne.

236. HIGHER PLANE CURVES. Prerequisite, Mathematics 152. Credit: 1 course.

A course dealing with plane curves, particularly conics, cubics, and quartics; polarity, Plücker formulas, curves of Hesse, Steiner, and Cayley; classification of cubics, intersections of curves, singularities of curves, unicursal curves. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Lasley.

241. LIE THEORY OF DIFFERENTIAL EQUATIONS. Prerequisite, Mathematics 141. Credit: 1 course.

A study of differential equations from the point of view of continuous groups. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Hobbs.

246. MODERN HIGHER ALGEBRA. Prerequisite, Mathematics 131. Credit: 1 course.

Polynomials and their fundamental properties, determinants, theory of linear dependence, linear equations, matrices, invariants, bilinear and quadratic forms. *Five hours a week, fall quarter.* Professor Browne.

251. ELEMENTS OF NON-EUCLIDEAN GEOMETRY. Prerequisite, Mathematics 151. Credit: 1 course.

The subject is treated chronologically. The contributions of Saccheri, Bolyai, Lobachewsky, Riemann, Calyey, Klein are studied, analyzed, and compared. *Five hours a week, winter quarter.* Professor Henderson.

256. ALGEBRAIC INVARIANTS. Prerequisite, Mathematics 131 and 152. Credit: 1 course.

An introduction to the non-symbolic theory of invariants of binary forms with applications to geometry, followed by an explanation of the symbolic

notation of Clebsch with practice in its use. Based on Dickson's *Algebraic Invariants. Five hours a week, winter quarter.* Professor Browne.

261. DIFFERENTIAL GEOMETRY. Prerequisite, Mathematics 141 and 152. Credit: 1 course.

A study of the metric differential geometry of curves, surfaces, and curves on surfaces, systems of curves defined by differential equations, surfaces given by two quadratic differential forms. *Five hours a week, spring quarter.* Professor Lasley.

266. THEORY OF FUNCTIONS OF A REAL VARIABLE. Prerequisite, Mathematics 131 and 171. Credit: 1 course.

The real number system from the standpoints of Cantor and Dedekind, elementary theory of point sets, limits, series, implicit functions, Riemann and Lebesgue integrals. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Mackie.

271. INTRODUCTION TO THE THEORY OF RELATIVITY. Prerequisite, Mathematics 121 and 141. Credit: 1 course.

In this course the essential features of the special and general relativity theories of Einstein are set forth from the mathematical point of view. Particular study is made of the Lorentz transformation and of the three crucial tests of the theory. *Five hours a week, fall quarter.* Professor Henderson.

272. TENSOR ANALYSIS. Prerequisite, Mathematics 141 and 271. Credit: 1 course.

A study of transformations of coördinates and tensor invariants under such transformations. Especial attention is paid to the application of tensors to the study of differential geometry and relativity theory. *Five hours a week, winter quarter.* Professor Hoyle.

273. ADVANCED RELATIVITY THEORY. Credit: 1 course.

Restricted relativity, with applications to physical and electrical problems. General relativity and grativitation. Geodesics and curvature in space-time. Cosmological speculations as to a finite, unbounded universe, and also an expanding universe. Theories of Einstein, DeSitter, Eddington, and LeMaitre. *Five hours a week, spring quarter.* Professor Henderson.

281. CALCULUS OF VARIATIONS. Prerequisite, Mathematics 266. Credit: 1 course.

A study of various kinds of minimizing problems, determining functions which minimize certain definite integrals. Isoperimetric problems. Necessary conditions for an extreme as deduced by Euler, Weierstrass, Legendre, and Jacobi, and conditions sufficient to insure such an extreme. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Mackie.

286. PROJECTIVE DIFFERENTIAL GEOMETRY. Prerequisite, Mathematics 152 and 261. Credit: 1 course.

A study of the projective properties of curves and ruled surfaces by means of the invariants and covariants of systems of homogeneous differential equations. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Lasley.

291. INTRODUCTION TO THE THEORY OF FINITE GROUPS. Prerequisite, Mathematics 131. Credit: 1 course.

Deals with the theory of substitutions in general, and as applied to the algebraic equation. Simple and compound groups, transitivity and primitivity. Cyclic and linear groups, linear fractional substitutions, etc. Numerous applications in algebra and geometry. *Five hours a week, spring quarter.* Professor Henderson.

SEMINARS AND THESES

Credit: 1 course each.

Reading and research in mathematics conducted by members of the department, as follows:

351. Thesis work and Seminar. Professor Henderson.
356. Thesis work and Seminar. Professor Lasley.
361. Thesis work and Seminar. Professor Hobbs.
366. Thesis work and Seminar. Professor Browne.
371. Thesis work and Seminar. Professor Winsor.
376. Thesis work and Seminar. Professor Mackie.

DEPARTMENT OF MUSIC

Associate Professor McCORKLE; Assistant Professors KENNEDY, WOODMAN; Instructors MILLER, SLOCUM.

Courses for Undergraduates

1. MUSIC THEORY AND FUNDAMENTALS. Credit: 1 course.
A course covering musical terminology and the theory of music notation, including a study of modes, scale structure, melodic construction, etc. *Five hours a week, fall quarter.* Professor McCorkle.

3-4-5. SIGHT-SINGING AND EAR-TRAINING. Credit: 3 courses.
A course in the reading and the recognition of music notation, from the standpoint of both eye and ear. No prerequisites or previous training are necessary for number 3. Students may be admitted to number 4 at the beginning of the winter quarter, or number 5 at the beginning of the spring quarter, if they have had sufficient experience to pass an examination for advanced standing. *Five hours a week, fall, winter, and spring quarters.* Mr. Miller.

21-22-23. HARMONY. Prerequisite, Music 1 or its equivalent. Credit: 1½ courses.
A beginner's course in harmony. *Three hours a week, fall, winter, and spring quarters.* Professor Kennedy.

24-25-26. HISTORY OF MUSIC. Credit: 1½ courses.
A study of the historical development of music and its relation to the sociological and political history of the race. In exceptional cases students may enter the course at the beginning of any quarter. *Three hours a week, fall, winter, and spring quarters.* Professor McCorkle.

51-52-53. APPRECIATION OF MUSIC. Credit: 3 courses.
A study of music as a literature. The course makes a comparative study of music with the literature of poetry, the drama, and the novel. Along with this the study also involves the philosophy and the psychology of music and the sociological reflections in music. The subject matter is designed for the layman who desires a cultural and intellectual experience in listening to music. *Five hours a week, fall, winter, and spring quarters.* Professor McCorkle.

57-58-59. ADVANCED HARMONY. Credit: 1½ courses.
Continuation of Music 21-22-23, which are prerequisite. *Three hours a week, fall, winter, and spring quarters.* Professor Kennedy.

61-62-63. COUNTERPOINT. Prerequisite, two years of harmony, Music 21-22-23, 57-58-59, or equivalent. Credit: 1½ courses.
Three hours a week, fall, winter, and spring quarters. Professor Kennedy

64. CANON AND FUGUE. Prerequisite, Theory, Harmony, and Counterpoint. Credit: ½ course.
Three hours a week, fall or winter quarter. Mr. Slocum.

65. FORM AND ANALYSIS. Prerequisite, Harmony, Counterpoint, Canon and Fugue. Credit: ½ course.
Three hours a week, winter and spring quarters. Mr. Slocum.

71-72-73. INSTRUMENTATION. Credit: 1½ courses.
A course in the study of the principles and practice of instrumentation for band and orchestra. Orchestra and band music will be heard, analyzed, and studied, and music will be arranged for orchestra and band. *Three hours a week, fall, winter, and spring quarters.* Mr. Slocum.

74-75-76. COMPOSITION. Prerequisites, Music 61-62-63 or equivalent. Credit: 1½ courses.
A study of free expression of original musical ideas. *Three hours a week, fall, winter, and spring quarters.* Seminar by Special Arrangement.

81-82-83. APPLIED MUSIC. Credit: 3 courses towards A.B. in Music only.
Open to any student of the University who desires the cultural experience of the study of piano, organ, violin, voice, and orchestral instruments: credit restricted to candidates for A.B. in Music.
Students taking the A.B. in Music must meet certain requirements in the playing of their major instrument before they can be accepted as unconditioned freshmen. Two private lessons a week are required with a minimum of ten hours weekly practice throughout the first year, and fifteen hours weekly practice throughout the second and third years. The number of lessons a week and the number of practice hours a week for the fourth year will be determined by the standing of the student at that time.
Students who are candidates for the music degree will be required to participate in the musical organizations of the department, choosing the one which best exemplifies the work of their major applied music.

Applied Music Courses

Note: The following regulations govern individual instruction in Applied Music Courses A. B. C. D. and E.

1. Practice rooms and periods are assigned at the music department office. Fee for one hour daily practice period, (room with piano) $3.00 a quarter.
2. Fee for one hour daily practice on Skinner three manual organ, $18.00 a quarter. Fee for one hour daily practice on Reuter four manual concert organ, $25.00 a quarter.
3. After registration, all fees for applied music and practice must be paid at the music department office where receipts will be issued. The receipt for applied music instruction must be presented to the instructor at the first lesson period.

A. INDIVIDUAL INSTRUCTION IN PIPE ORGAN PLAYING.
For students seeking the degree of A.B. in Music, instruction on basis indicated above. Open to other students without credit. Enrollment by the quarter only. Fee, $18.00 a quarter for one lesson a week. Professor Kennedy.

B. INDIVIDUAL INSTRUCTION IN PIANO PLAYING.
For students seeking the degree of A.B. in Music, instruction on basis indicated above. Open to other students without credit. Enrollment by the quarter only. Fee, $18.00 a quarter for one lesson a week. Professor Kennedy.

C. INDIVIDUAL INSTRUCTION IN SINGING.
For students seeking the degree of A.B. in Music, instruction on basis indicated above. Open to other students without credit. Enrollment by the quarter only. Fee, $18.00 a quarter for one lesson a week. Mr. Miller.

D. INDIVIDUAL INSTRUCTION IN VIOLIN PLAYING.

For students seeking the degree of A.B. in Music, instruction on basis indicated above. Open to other students without credit. Enrollment by the quarter only. Fee, $18.00 a quarter for one lesson a week. Professor McCorkle.

E. *INDIVIDUAL INSTRUCTION IN ORCHESTRAL AND BAND INSTRUMENTS.

For students seeking the degree of A.B. in Music, instruction on basis indicated above. Open to other students without credit. Enrollment by the quarter only. Fee, $12.00 a quarter for one lesson a week. Mr. Slocum.

DEPARTMENT OF PHILOSOPHY

Professor H. H. WILLIAMS; Associate Professors †GREEN, EMERY; Instructor M. H. WILLIAMS; Dean BRADSHAW.

Courses for Undergraduates

41. INTRODUCTION TO PHILOSOPHY. Credit: 1 course.

This course is intended to serve as an introduction to later work in philosophy; but its main purpose is to give a general view of philosophy to those who may take no further courses in the subjects. Lectures and discussions. *Five hours a week, every quarter. Fall and winter quarters* (Professor Emery); *spring quarter* (Mr. M. H. Williams).

56. THE HISTORY OF ANCIENT AND MEDIEVAL PHILOSOPHY. Credit: 1 course.

A survey course beginning with the early Greek thinkers and continuing through Medieval Philosophy. *Five hours a week, fall quarter.* Mr. M. H. Williams.

57. THE HISTORY OF MODERN PHILOSOPHY. Credit: 1 course.

A survey course tracing the development of philosophic thought from the Renaissance to the nineteenth century. *Five hours a week, winter quarter.* Mr. M. H. Williams.

61. CONTEMPORARY PHILOSOPHY. Credit: 1 course.

A study of New Realism, Pragmatism, and Idealism as contemporary outgrowths of important movements in the history of philosophy. *Five hours a week, spring quarter.* Professor Emery.

62. PLATO AND ARISTOTLE. Credit: 1 course.

A reading course in the principal works of Plato and Aristotle. Open to those students who have taken Philosophy 56. *Five hours a week, winter quarter.* Mr. M. H. Williams.

96. THE PHILOSOPHY OF RELIGION. Credit: 1 course.

A study of the historical development of religion as exemplified in Brahmanism, Buddhism, the religions of Greece and Rome, Judaism, and Christianity, with emphasis upon the last and its growth from Jewish and Hellenic influences. Some of the philosophical problems of religious belief will be considered. *Five hours a week, fall or spring quarter.* Mr. M. H. Williams.

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* In not *all* wood-wind, brass, and percussion instruments is instruction available at present. Applicants should consult the head of the Department of Music before enrolling.

† Absent on leave, 1933-1934.

Courses for Graduates and Advanced Undergraduates

131-132-133. LOGIC AND CIVILIZATION. Credit: 3 courses.
The purpose of this course is to show how intelligence works both in the individual and in the currents of thought that constitute civilization. The student will be furnished a kit of tools with which to solve some of the problems which will confront him in living his own life and understanding the world about him. *Five hours a week, fall, winter, and spring quarters.* Professor Williams.

171-172-173. ETHICS. Credit: 3 courses.
A survey of ethics, historical and contemporary. The first quarter is concerned with the beginnings of ethical standards in the historical religions of the world and the subsequent development of ethical theory. The second quarter traces the contributions to the theory of values made by the scientific developments of the last two centuries. The third quarter is devoted to contemporary ethical problems, economic, political, and personal; and the logical foundation of ethical theory. Lectures, discussion, and directed reading. *Five hours a week, fall, winter, and spring quarters.* Dean Bradshaw.

Courses Primarily for Graduates

224-225-226. KANT. Credit: 3 courses.
An intensive study of the *Critique of Pure Reason* with important commentaries, in the light of Kant's whole philosophy and its historical context. *Five hours a week, fall, winter, and spring quarter.* Professor Emery.

227-228-229. STUDIES IN HEGEL. Credit: 3 courses.
This course aims to consider Hegel's system as grounded in the *Logik* and exhibited in the *Phenomenologie. Five hours a week, fall, winter, and spring quarters.* Professor Williams.

311. SPECIAL READINGS. Credit: 1 course.
Reading in a special field under the direction of a member of the Department.

DEPARTMENT OF PHYSICS

Professors STUHLMAN, FUSSLER; Associate Professor PLYLER; Instructor CRAVEN; Teaching Fellow McCAY; Assistants BARR, SMITH.

Courses for Undergraduates

21-22. GENERAL PHYSICS. PART I. Prerequisite, Mathematics 1-2, but may be elected in the spring quarter by Freshmen who have taken Mathematics 1-2. Credit with Part II: 2 courses.
Mechanics of solids, liquids, and gases; sound and heat. Lectures; problems; laboratory work. *Five lecture and three laboratory hours a week, every quarter. Laboratory fee, $4.00.* Professors Fussler, Stuhlman, Plyler; Mr. Craven and Assistants.

GENERAL PHYSICS. PART II. Prerequisite, Mathematics 1-2 and Physics 21. Credit: see Part I.
Light, electricity, and magnetism. Lectures; problems; laboratory work. *Five lecture and three laboratory hours a week, every quarter. Laboratory fee, $4.00.* Professor Fussler, Stuhlman, Plyler; Mr. Craven and Assistants.

21-22-23E. PHYSICS FOR ENGINEERING STUDENTS. Required of Engineering Sophomores. Prerequisite, Mathematics 1-2-3E or equivalent. Credit: 2 courses.

This is a course given with special reference to the needs of students of engineering. Problem work is given on subjects dealing with engineering. *Three lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $2.75 a quarter.* Professors Fussler; Mr. Craven.

41. ASTRONOMY. Credit: 1 course.
A general course in descriptive and historical astronomy; lectures and recitations, with use of lantern slides, star-maps, telescope, etc. *Five hours a week, spring quarter.* Professor Fussler.

51. X-RAY TECHNIQUE: BIOPHYSICS. Prerequisite, Physics 21-22. Credit: 1 course.
Laboratory work in the physical aspects of X-ray apparatus, technique of photographic and fluoroscopic roentgenology, with some applications to biophysical problems. *Two lecture and eight laboratory hours a week, spring quarter. Laboratory fee, $15.00.* Professor Stuhlman.

52, 53. RESEARCH FOR SENIORS. Credit: 1 course each quarter.
Professors Stuhlman, Plyler.

Courses for Graduates and Advanced Undergraduates

101. MECHANICS AND WAVE MOTION. Prerequisite, Physics 21-22. Mathematics 24. Credit: 1 course.
Lectures, problems. Required in all majors and minors in phyiscs. *Five hours a week, fall quarter.* Professor Stuhlman.

102. HEAT. Prerequisite, Physics 21-22, Mathematics 24. Credit: 1 course.
A study is made of the fundamental principles in the theory of heat, such as expansion and conduction, vapor pressures, and measurement of temperature. *Five hours a week, fall quarter.* Professor Plyler.

103. MODERN ELECTRICAL THEORY. Prerequisite, Physics 21-22, Chemistry 1-2. Credit: 1 course.
Lectures, atomic and molecular structures, general theory of spectra, x-rays, radio-activity, elementary quantum theory. *Five hours a week, winter quarter.* Professor Stuhlman.

104. ELECTRICITY AND MAGNETISM. Prerequisite, Physics, 21-22. Mathematics 24. Credit: 1 course.
Lectures, problems, and laboratory work in electrical measurements. *Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $3.00.* Professor Plyler.

105. OPTICS. Prerequisite, Physics 21-22. Credit: 1 course.
A treatment of the fundamental principles of geometrical and physical optics. Lectures, problems, and laboratory work. *Four lecture and two laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Professor Stuhlman.

106. INTRODUCTION TO MATHEMATICAL PHYSICS. Prerequisite, Mathematics 25, or its equivalent, Physics 101, 102, 103, 104, 105. Credit: 1 course. (1934 and alternate years.) *Five hours a week, spring quarter.* Professor Stuhlman.

107, 108. ADVANCED GENERAL LABORATORY. Credit: ½ course each quarter.
This course affords an opportunity for further training and experimental study in physics not given in other courses. *Six laboratory hours a week, every quarter. Laboratory fee, $3.00.* Professors Stuhlman, Fussler, Plyler.

109. ADVANCED ELECTRICITY AND MAGNETISM. Prerequisite, Physics 104, Mathematics 25.

This course is a continuation of Physics 104 but gives a detailed mathematical treatment of the subject and includes the electromagnetic theory of light. *Five hours a week, winter quarter.* Professor Plyler.

Courses Primarily for Graduates

201. THERMODYNAMICS. Prerequisite, Physics 102, Mathematics 25.

The laws of thermodynamics are discussed and then applied to various systems. A mathematic treatment with many applications to physics and chemistry is given. The Nernst heat theorem and the applications of thermodynamics to radiation are studied. *Five hours a week, winter quarter.* Professor Plyler.

202. THEORY OF HEAT. Prerequisite, Physics 102, Mathematics 25. Credit: 1 course.

Kinetic theory of gases. Change of state. Radiation and temperature. *Five hours a week, fall quarter.* Professor Plyler.

203. ATOMIC STRUCTURE. Prerequisite, Physics 103, 105, Mathematics 25. Credit: 1 course.

A critcial survey of the experimental and theoretical evidence in various branches of physics and chemistry for the present theories of the structure of atoms and molecules. The problems of modern physics. A reading knowledge of German is required. *Five hours a week, spring quarter.* Professor Stuhlman.

204. CLASSICAL MATHEMATICAL THEORY OF ELECTRICITY AND MAGNETISM. Prerequisite, Physics 104, Mathematics 141. Credit: 1 course.

General electrostatic theory; ideal electric fields; condensers with homogeneous and non-homogeneous dielectrics; general laws of conduction; thermal effects; magnetostatic fields; electro-magnetic phenomena; electric waves. *Five hours a week, winter quarter.* Professor Stuhlman.

301, 302. RESEARCH. Credit: 1 course each quarter.

Intended for applicants for advanced degrees. Experimental work. Subject must be assigned or approved by the professor in charge. A reading knowledge of French and German is required. Professors Stuhlman, Plyler.

NOTE: Courses in advanced analytical mechanics and in vector analysis are offered by the Department of Mathematics.

DEPARTMENT OF PSYCHOLOGY

Professors DASHIELL, CRANE, BAGBY; Instructors WELCH, WICKENS, SPELT; Teaching Fellow BICE.

Courses for Undergraduates

21-22. GENERAL PSYCHOLOGY. Credit: 2 courses.

The aim of the course is to present the essential phenomena of psychology as an experimental natural science. Emphasis is placed on the organic relationships within the whole field and upon some crucial problems of daily life. Lectures, textbook, laboratory. *Four lecture and four laboratory hours a week, fall and winter, or winter and spring quarters. Laboratory fee, $4.00 a quarter.* Professors Dashiell, Bagby; Messrs. Wickens, Bice, Welch, Spelt.

Courses for Graduates and Advanced Undergraduates

Note. Psychology 21 and 22 or their equivalent are prerequisite for each of the following courses.

125. ANIMAL PSYCHOLOGY. Credit: 1 course.
Reading topics: evolution of structure and behavior (Parker, Child, Coghill), tropic behavior (Jennings, Loeb), instinctive (Peckhams, Lubbock, Stone), habitual (Thorndike, Yerkes, Watson, and others), reflex (Sherrington, Pavlov), insight (Köhler, Maier), motivation (Moss, Richter). The class will conduct experimental studies in animal learning. *Five hours a week, winter quarter. Laboratory fee, $2.00.* Professor Dashiell; Mr. Spelt.

126. CHILD PSYCHOLOGY. Credit: 1 course.
This course is primarily a critical examination of the experimental methods used in child psychology. The members of the class will be given an opportunity of repeating some of the major experiments. The chief subdivisions to be studied are the original behavior equipment, the growth and maturation of structure, the acquisition of habits, the development of capacity, and the formation of interests. Lectures, readings, and experiments with children. *Five hours a week, spring quarter.* Professor Bagby.

135. ECONOMIC PSYCHOLOGY: INDUSTRIAL AND VOCATIONAL. Credit: 1 course.
There will be two main divisions of the course, as follows: (1) The adjustment of the worker to his work—including training, effects of incentive, monotony, and fatigue; motion study and mental hygiene in industry. (2) The selection of personnel for various kinds of work, with the industrial use of tests of intelligence and personality. An outline of vocational psychology will be given, and the psychology of salesmanship discussed. Lectures, experiments, readings. *Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, $2.00.* Professor Bagby.

136. ECONOMIC PSYCHOLOGY: ADVERTISING. Credit: 1 course.
An attempt is made to present systematically those aspects of psychology which will aid the advertiser more effectively to construct and present his advertisements. While aiming to give information of practical value, the emphasis is placed upon the establishment of a point of view which will be of assistance in the development of a general technique on the part of the advertiser. (Given alternately with Psychology 145; not given in 1933-1934.) *Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, $2.00.* Professor Crane.

138. LEGAL PSYCHOLOGY. Credit: 1 course.
The course is organized about some of the major problems of a psychological nature with which the law is concerned; such as, the accuracy of testimony, the reliability of findings by juries, responsibility and criminal psychology, the effects of punishment, modes of detecting suppression of guilty knowledge. The aim is to obtain an accurate knowledge of the present status of each problem; and the method will be that of a natural science approach leading ultimately to implications of practical legal character. Readings, lectures, and experiments. *Five hours a week, spring quarter. Laboratory fee, $2.00.* Professor Dashiell.

140. PSYCHOLOGY OF PERSONALITY. Credit: 1 course.
This course is a consideration of certain of the factors upon which the quality of human adjustments depend. Emphasis is placed upon emotional reactions as primary sources of motivation and an attempt is made to indicate the most effective methods of training and of retaining the various types of emotional reactions. *Five hours a week, fall quarter.* Professor Bagby.

145. ABNORMAL PSYCHOLOGY: FEEBLE-MINDEDNESS. Credit: 1 course.

Presentation of the psycho-neural aspects of feeble-mindedness in general, and of the various types, together with their importance in relation to the problems of education, dependency, and delinquency. There will be discussion and demonstration of the various clinical methods of determination and classification of feeble-mindedness. (Given alternately with Psychology 136; given in 1933-1934.) *Five hours a week, winter quarter. Laboratory fee, $1.00.* Professor Crane.

146. ABNORMAL PSYCHOLOGY: PSYCHONEUROSES AND PSYCHOSES. Credit: 1 course.

A study is made of the more important deviations from the normally reacting and experiencing human organism. Attention is given to the sensory, imaginal, emotional, motor, etc., abnormalities and to the occurrence of these in the various psychoses. Brief surveys are given of the methods of clinical psychology and of psychotherapy. *Five hours a week, spring quarter. Laboratory fee, $1.00.* Professor Crane.

147. ABNORMAL PSYCHOLOGY: METHODS OF MENTAL EXAMINATION. Credit: 1 course.

A presentation of the various psychological methods used in the clinical study of individuals. This includes a study of the methods used in determination of the presence or absence of specialized defects as well as the determination of level of intelligence. Lectures, experiments, readings. *Four lecture and two laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Professor Crane.

151, 152, 153. EXPERIMENTAL PROBLEMS. Credit: 1 course each quarter.

To the student who finds himself especially interested in some particular problem of psychology, perhaps as growing out of the subject matter of one of the preceding courses, encouragement and opportunity are here offered for investigative study. May be elected any quarter, and for one, two, or three quarters. *One lecture and eight laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 a quarter.* Professors Dashiell, Crane, Bagby.

190. CONTEMPORARY PSYCHOLOGICAL TENDENCIES. Credit: 1 course.

A systematic survey of the more outstanding modern and contemporary movements in psychology. Historical survey, using Murphy's text and Rand's readings, followed by readings in Titchener, James, Watson, Freud, Köhler, Koffka, Spranger, and perhaps others. Open only to graduate students and to seniors majoring in Psychology; required of all prospective candidates for advanced degrees. *Five hours a week, fall quarter.* Professor Dashiell.

Courses Primarily for Graduates

201. ADVANCED EXPERIMENTAL PSYCHOLOGY. Credit: 1 course.

A training course in the technique of psychology experimentation and research, to acquaint the advanced student both with methods and with typical forms of apparatus. A survey will be made of experimental technique in the study of the various motor, sensory, thinking, and emotional functions, including both introspective and behavioristic approaches. *One lecture and nine laboratory hours a week, fall quarter. Laboratory fee, $4.00.* Professor Dashiell; Mr. Welch.

202-203. RESEARCH IN PSYCHOLOGY. Prerequisite, Psychology 201. Credit: **2 courses.**

Opportunity will be given for the experimental investigation of special problems along the line of the individual student's interests. The personal and material resources of the department are here especially offered. *Ten laboratory hours a week, winter and spring quarters. Laboratory fee, $2.00 a quarter.* Professors Dashiell, Crane, Bagby.

205. PHYSIOLOGICAL PSYCHOLOGY. Credit: 1 course.
An intensive study is made. Emphasis is placed upon the neural mechanism as a basis of understanding both the mental and the reaction phenomena of psychology. *Six hours a week, winter quarter. Laboratory fee, $2.00.* Professor Crane.

208. SOCIAL PSYCHOLOGY. Credit: 1 course.
The reading assignments of this course deal primarily with experimental techniques and findings. The lectures include a brief historical survey and an attempt to identify the psychological processes underlying familiar social phenomena. Members of the class are required to present reviews of outstanding texts. *Five hours a week, winter quarter.* Professor Bagby.

325. SEMINAR. Credit: 1 course.
An advanced course devoted to the extensive or intensive survey of current or of historical material bearing upon some limited problem or field of psychology—such as motivation, emotion, thinking, the Gestalt movement, reflexology, etc. The problem studied will be varied from year to year. *Five hours a week, fall, winter, or spring quarter, to be specially announced.* Professors Dashiell, Crane, Bagby.

341-342. ADVANCED RESEARCH. Credit: 2 courses.
Experimental or clinical research to be done by advanced graduate students only. *Ten laboratory hours a week, any two quarters.* Professors Dashiell, Crane, Bagby.

The student is referred also to courses in Educational Psychology, Education 71, 173, and 271-2, given by Professor Jordan; to a course in Neurology, Anatomy 5, given by Professor Mangum; and to courses in Statistics, Mathematics 111, given by Professor Hill, Education 103, given by Professor Trabue, and Economics 71, given by Professor Ferger.

DEPARTMENT OF PUBLIC ADMINISTRATION

PROFESSORS JACKSON, WOODHOUSE; Associate Professors SANDERS; BROWN; Field Supervisor LAWRENCE.

Note. For descriptions of the courses listed by titles only the reader is referred to the departments and numbers shown in parenthesis.

Courses for Undergraduates

35. ECONOMIC HISTORY (Economics 35).

42. SOCIAL PROBLEMS (Sociology 42).

71-72. ACCOUNTING (Commerce 71-72).

75. ECONOMIC STATISTICS (Economics 71).

80a. THE PRINCIPLES AND PRACTICE OF SANITATION (Civ. Eng'g. 80a).

82. AMERICAN LITERATURE (English 82).

91-92. BUSINESS LAW (Commerce 91-92).

Note. ***Graduate credit for courses 103, 115, 175, 181, 183, 201, 210, 212, 235 is withheld pending action of the Administrative Board of the Graduate School.***

Courses for Graduates and Advanced Undergraduates

101. PUBLIC ADMINISTRATION. Prerequisite, Bachelor's degree, or three courses in Government, History, Economics, and Sociology. Credit: 1 course.

General problems of public administration in the modern state. The development of administration; the principles of organization; its relation to the legislative and judicial branches of government; the processes of integration and centralization; the administrative reorganization of the United States; relation to administrative law; etc. Special problems of administration, such as personnel, the budget, administrative rules and regulations, morale, recruitment and examinations, promotion and efficiency methods, and retirement systems, will be considered. *Fall or spring quarter.* Professor Jackson.

103. PUBLIC HEALTH AND HYGIENE (Bacteriology 4).

111. NORTH CAROLINA: ECONOMIC AND SOCIAL (Rural Social Economics 101).

115. CRIMINAL LAW ADMINISTRATION (Law).

122. GOVERNMENT AND ADMINISTRATION OF EUROPEAN CITIES (Government 122).

131. AMERICAN STATE GOVERNMENT (Government 131).

132. AMERICAN MUNICIPAL GOVERNMENT (Government 132).

134. COUNTY GOVERNMENT AND ADMINISTRATION (Government 134 and Rural Social Economics 134).

138. LEGAL PSYCHOLOGY (Psychology 138).

141. PUBLIC FINANCE (Economics 141).

142. FINANCIAL ORGANIZATION AND ADMINISTRATION (Economics 142).

144. MENTAL HYGIENE IN RELATION TO SOCIAL WORK (Psychology 144). Credit: ½ course.

A course primarily for students in the Department of Public Administration who are working toward a degree or a certificate in social work. Particular emphasis will be given to the place of the social worker in mental hygiene; feeble-mindedness, psychoses, and minor mental aberrations in relation to social work; and ways in which a social worker may be a factor in mental hygiene. *Three hours a week, winter quarter.* Professor Crane.

145. ABNORMAL PSYCHOLOGY: FEEBLE-MINDEDNESS (Psychology 145).

146. ABNORMAL PSYCHOLOGY: PSYCHONEUROSES AND PSYCHOSES (Psychology 146).

150ab. CITY PLANNING AND HIGHWAY ENGINEERING (Engineering 160ab).

151. ELEMENTS OF POLITICAL SCIENCE (Government 151).

155. PERSONNEL MANAGEMENT (Commerce 155).

160. INTRODUCTION TO SOCIAL WORK (Sociology 160). Credit: 1 course.

Essentially a professional course in social problems with the emphasis laid upon methods of treatment by public and private social agencies. After a brief discussion of the nature, purpose, and scope of social work the course will deal chiefly with the major social problems, such as poverty and destitution, physical and mental deficiency, disease, crime, and delinquency. Methods of education and training for social work will also be taken up in considerable detail. *Five hours a week, fall quarter.* Professor Sanders.

161. NORTH CAROLINA, 1663-1789 (History 161).

162. NORTH CAROLINA, 1789-1900 (History 162).

164. FAMILY CASE WORK. Credit: 1 course.

Discussion of the relation of the individual to the family and the family to the community. The technique of case work and its scientific approach—methods of investigation, interviewing, social evidence, sources, diagnosis, treatment. Class work is supplemented by field work under the supervision of members of the staff of the School of Public Administration. *Five hours a week, winter quarter.* Professor Sanders.

165. ADVANCED FAMILY CASE WORK. Credit: 1 course.

A continuation of course 164, with more intensive study of case work. Class work is supplemented by field work under the supervision of members of the staff of the School of Public Administration. *Five hours a week, spring quarter.* Professor Sanders.

167. ECONOMIC HISTORY OF THE UNITED STATES (History 167).

168. THE COMMUNITY (Sociology 168).

173. PLAY AND RECREATION (Sociology 173).

175. POLITICAL PARTIES. Prerequisite, Government 21. Credit: 1 course.

History, organization, and policies of major and minor parties; nominating systems; ballot and election laws; party finance; political machines; influence of party upon executive and legislative branches of government. Special emphasis upon the relation of party to administration and to current American politics. Lectures, readings, and reports. *Five hours a week, winter quarter.* Professor Jackson.

179. GOVERNMENTAL ACCOUNTING (Commerce 179).

181. INFECTION, IMMUNITY, AND SERUM DIAGNOSIS (Bacteriology 3).

185. PUBLIC HEALTH LABORATORY METHODS (Bacteriology 5).

192. CRIME (Sociology 192). Credit: 1 course.

Nature and causes of crime; evolution of modern methods of criminal procedure; administration of penal and reformatory institutions; programs for the social treatment of the criminal; the problems of juvenile delinquency. The class work will be supplemented by field trips to criminal courts and penal institutions. *Five hours a week, winter quarter.* Professor Brown.

193. SOCIAL PATHOLOGY (Sociology). Credit: 1 course.

A survey of the abnormal and pathological aspects of society. Among the problems studied are feeble-mindedness, insanity, physical defectiveness, malnutrition, alcoholism, prostitution, vagrancy, family disorganization. Emphasis is given to methods of treatment by private and public institutions and agencies. Class work is supplemented by field trips to county and state institutions. *Five hours a week, fall quarter.* Professor Brown.

198. JUVENILE DELINQUENCY (Sociology 198). Credit: 1 course.

This course deals with the diagnosis and treatment of juvenile delinquency from the social worker's viewpoint. Under diagnosis will be taken up the methodology of the social scientists in this field, and the evaluation of the different causative factors of juvenile delinquency. Under treatment will be covered the work of the juvenile court, probation, parole, and institutional care. *Five hours a week, fall quarter.* Professor Sanders.

199. PUBLIC CARE OF CHILDREN. Credit: 1 course.

This course is intended primarily for students who expect to follow social work as a profession. The major part of the course will be devoted to the study of methods and technique of the social agencies engaged in the social treatment of the different classes of children who stand in need of public care and protection, such as the delinquent child, the dependent or neglectd child, the defective child, and children in employment. The latter part of the course will be devoted to a discussion of public responsibility for the welfare of children in general, especially from the standpoint of education, health, and maintenance. *Five hours a week, winter quarter.* Professor Sanders.

Courses for Graduates Only

201. PUBLIC UTILITIES (Law).

208. SOCIAL PSYCHOLOGY (Psychology 208).

210. ADMINISTRATIVE LAW (Law).

212. PUBLIC HEALTH LAW (Law).

215. SOCIAL DEMOGRAPHY (Sociology 215).

225. MUNICIPAL CORPORATIONS (Law).

230. CONSTITUTIONAL LAW (Law).

235. LEGISLATION (Law).

260ab. REGIONAL AND CITY PLANNING (Engineering 260ab).

266. PUBLIC WELFARE. Credit: 1 course.

1. The organization of Public Welfare in the United States. 2. Detailed study of the North Carolina Plan. 3. Office Organization and Administration. (Alternates with 267. 1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Brown.

267. SOCIAL LAWS. Credit: 1 course.

The development of social legislation pertaining to important social problems. Special attention to social laws of North Carolina. (Alternates with 266. 1933-1934 and alternate years.) *Five hours a week, spring quarter.* Professor Brown.

271abc. RURAL SOCIAL PROBLEMS (Rural Social Economics 271abc).

301abc. RURAL ECONOMICS (Rural Social Economics 301abc).

303abc. PROBLEMS IN EDUCATIONAL ADMINISTRATION (Education 303abc).

305. SEMINAR IN COUNTY ADMINISTRATION (Rural Social Economics 305 or Government 305).

DEPARTMENT OF ROMANCE LANGUAGES

Professors DEY, LEAVITT, HOLMES, ADAMS, HUSE; Associate Professors STAAB, LYONS (Secretary), BOGGS; Assistant Professors STOUDEMIRE, WILEY; Instructors J. L. SMITH, WRIGHT, LINKER, CARROLL, MCLEOD, SHIELDS, TAYLOR, W. P. SMITH, HAYES, THURMAN; Teaching Fellows CREECH, FRIERSON, WEAVER.

*FRENCH

Courses for Undergraduates

1-2. ELEMENTARY FRENCH. Credit: 2 units or 2 courses.

Essentials of French Grammar. Special drill in pronunciation. It is aimed to make this course as practical as possible, with much oral work. This course may be counted for credit by those only who fulfill the requirements for the degree in two other foreign languages and provided it is followed by French 3-4. Course 2 will be given in the fall also. *Five hours a week, fall and winter, winter and spring quarters.* Professors Lyons, Wiley; Messrs. J. L. Smith, Wright, Linker, Carroll, McLeod, Taylor, Thurman, Frierson.

NOTE: No student is permitted to take French 1 or 2 and Spanish 1 or 2 at the same time.

3-4. INTERMEDIATE FRENCH. Prerequisite, French 1-2 or the equivalent. Credit: 2 courses.

Reading of modern French literature, frequent composition, and dictation. Course 4 will be given in the fall also. *Five hours a week, fall and winter, winter and spring quarters.* Professors Huse, Staab, Wiley; Messrs. J. L. Smith, Wright, Linker, Carroll, McLeod.

21. INTRODUCTION TO FRENCH LITERATURE. Prerequisite, French 3-4. Credit: 1 course.

Introduction to the study of French literature. A general survey of French literature to the end of the 17th century. Reading of plays of Corneille, Racine, and Molière. *Five hours a week, every quarter.* Professors Dey, Huse, Lyons, Wiley; Messrs. J. L. Smith, Linker, Carroll, McLeod.

22. MODERN FRENCH LITERATURE. Prerequisite, French 21. Credit: 1 course.

A general survey of French literature since the classical period with special stress on the 19th century. *Five hours a week, every quarter.* Professors Lyons, Wiley.

25. COMMERCIAL FRENCH. Open to students in the School of Commerce only. Prerequisite, French 21. Credit: 1 course.

The object of this course is to give the student practical training in modern French. Newspaper and magazine articles dealing with the life and customs of the country are read. Practice in social and commercial correspondence. This course is largely conducted in French. *Five hours a week, every quarter.* Professor Staab.

51. FRENCH CONVERSATION AND COMPOSITION. Prerequisite, French 21. Credit: 1 course.

The object of this course is to provide students with an opportunity to acquire practice in spoken French. Discussion in French on subjects of general interest. Composition and outside reading. *Five hours a week, fall or spring quarter.* Professor Lyons.

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* An undergraduate major in French consists of the following eight courses: French 22; 51; 52 or 126; 109 or 115 or 132; 145; 161 or 181; 131 or 171 or 172; 191 or 192.

52. FRENCH CIVILIZATION. Prerequisite, French 51. Credit: 1 course.
A rapid survey of the history of France, with emphasis on poitical and economic developments necessary to an understanding of the present situation. History and discussion of French institutions, with some reference to the history of French art and French music. All lectures, discussions, and reports on collateral reading are in French. *Five hours a week, winter quarter.* Professor Lyons.

55. REVIEW OF GRAMMAR AND SYNTAX. Prerequisite, French 21. Credit: 1 course.
This course is primarily for teachers, and is open to Juniors and Seniors who intend to teach French. It consists of an intensive review study of the elements and fundamentals of French grammar and syntax. Before registering for this course, students must secure the permission of the instructor. *Five hours a week, winter quarter.* Mr. J. L. Smith.

Courses for Graduates and Advanced Undergraduates

109. THE FRENCH NOVEL. Prerequisite, French 22. Credit: 1 course.
A study of the development of the novel in France. Lectures, readings, reports. *Five hours a week, winter quarter.* Professor Dey.

115. FRENCH LYRIC POETRY. Prerequisite, French 22. Credit: 1 course.
A study of French lyric poetry, beginning with Villon. Lectures, readings, reports. *Five hours a week, spring quarter.* Professor Huse.

126. HISTORY OF THE FRENCH LANGUAGE. Prerequisite, French 22. Credit: 1 course.
A general survey from the origins to the present day, with especial emphasis upon the period, 1500-1900: the influence of the Erudits, Précieuses, Philosophes, and Romanticists; spelling reforms. *Five hours a week, winter quarter.* Professor Holmes.

131. THE FRENCH DRAMA PRIOR TO 1700. Prerequisite, French 22. Credit: 1 course.
A survey of the religious and comic theatres of the Middle Ages; the theatre of the Renaissance and its relation to the classic theatres of Greece and Rome; the neo-classic theatre of the 17th century. *Five hours a week, winter quarter.* Professor Wiley.

132. THE FRENCH DRAMA SINCE 1700. Prerequisite, French 22. Credit: 1 course.
A survey of Modern French Drama with special attention to the theatrical principles and ideas of the different dramatic schools of the last two centuries. *Five hours a week, spring quarter.* Professor Wiley.

145. FRENCH PHONETICS. Prerequisite, French 21. Credit: 1 course.
A detailed study of the French vowel and consonant sounds by the phonetic method. This course is required of candidates with a major in French for the master's degree, and it should be elected by anyone who intends to teach French. *Five hours a week, fall quarter.* Professor Dey.

161. THE SIXTEENTH CENTURY. Prerequisite, French 22. Credit: 1 course.
A general treatment of the chief movements in French literature of the 16th century, with some reference to the Italian Renaissance and its influence on France. Specimen readings from he more important poets and prose writers: Marot, Rabelais, the Pléiade, Montaigne, etc. *Five hours a week, spring quarter.* Professor Lyons.

171. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. Prerequisite, French 22. Credit: 1 course.

A study of the period of Henry IV and Louis XIII. *Five hours a week, fall quarter.* Professor Lyons.

172. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY. Prerequisite, French 22. Credit: 1 course.

This course deals with the literature of the reign of Louis XIV. *Five hours a week, winter quarter.* Professor Lyons.

181. FRENCH LITERATURE OF THE EIGHTEENTH CENTURY. Prerequisite, French 22. Credit: 1 course.

Voltaire, Montesquieu, Rousseau, les Encyclopédistes. A study of the literary movement of the century and of the origins of romanticism. *Five hours a week, fall quarter.* Professor Huse.

191. FRENCH ROMANTICISM. Prerequisite, French 22. Credit: 1 course.

French literature from 1800 to 1850, with special stress on the works of the romantic poets, Lamartine, Hugo, Vigny, and Musset. Lectures, reading, reports. *Five hours a week, fall quarter.* Professor Dey.

192. FRENCH LITERATURE SINCE 1850. Prerequisite, French 22. Credit: 1 course.

A study of the later literary movements of the 19th century, with some emphasis on the contemporary period. Lectures, readings, reports. *Five hours a week, winter quarter.* Professor Dey.

Courses Primarily for Graduates

221-222-223. OLD FRENCH. Credit: 3 courses.

Reading of the oldest texts: La Chanson de Roland; Aucassin et Nicolette; Chrétien de Troyes. Lectures on French phonology and morphology. *Five hours a week, fall, winter, and spring quarters.* Professor Holmes.

225. PROVENCAL. Credit: 1 course.

A study of the ancient language and literature of Provence. The poetry of the Troubadours. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Holmes.

231. FRENCH SYNTAX. Credit: 1 course.

The most important phases of modern French syntax studied from an historical point of view. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Dey.

248. FRENCH LITERATURE OF THE 14TH and 15TH CENTURIES. Prerequisite, French 221 or 265. Credit: 1 course.

A combination of literary survey and reading course. Especial attention will be paid to Villon, who will be read entire with commentary. General treatment of such writers as Machaut, Froissart, Christine de Pisan, etc. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Holmes.

265-266. FRENCH LITERATURE OF THE RENAISSANCE. Credit: 2 courses.

A study of French Literature of the 16th century. Italian and French Humanism. The reformation. Marot, Rabelais, Calvin, the Pléiade, Montaigne. (1934-1935 and alternate years.) *Five hours a week, winter and spring quarters.* Professor Lyons.

331. HISTORY OF FRENCH LITERATURE PRIOR TO 1300. Credit: 1 course.

Lectures and seminar papers. A complete and careful study of the origins of French literature, with emphasis upon the twelfth century Renaissance, the period of the epics, beginning of romances, etc. French 221 is desired, though not a prerequisite. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Holmes.

391. STUDIES IN ROMANTICISM. Prerequisite, French 191. Credit: 1 course.

Seminar course. Intensive study of one of the romantic poets. (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Dey.

395. RESEARCH. Credit: 1 course.

Research in a special field under the direction of a member of the department.

CELTIC 205. MIDDLE IRISH. Credit: 1 course.

Grammar and reading of texts. Dottin, *Manuel de l'Irlandais Moyen, Táin Bó Cúailnge* (Supplement to *Eriu*). *Five hours a week, winter quarter.* Professor Holmes.

*SPANISH

Courses for Undergraduates

1-2. ELEMENTARY SPANISH. Credit: 2 units or 2 courses.

Essentials of Spanish grammar. Special drill in pronunciation. Reading of selected texts, with much oral drill. This course may be counted for credit by those only who fulfill the requirements for the degree in two other foreign languages and provided it is followed by Spanish 3-4. Course 2 will be given in the fall also. *Five hours a week, fall and winter, winter and spring quarters.* Professor Stoudemire; Messrs. Shields, W. P. Smith, Weaver, Hayes.

NOTE: No student is permitted to take Spanish 1 or 2 and French 1 or 2 at the same time.

3-4. INTERMEDIATE SPANISH. Prerequisite, Spanish 1-2 or the equivalent. Credit: 2 courses.

Reading of modern Spanish literature, composition, and dictation. Course 4 will be given in the fall also. *Five hours a week, fall and winter, winter and spring quarters.* Professors Leavitt, Adams, Stoudemire; Messrs. Shields, W. P. Smith.

21. INTRODUCTION TO SPANISH LITERATURE. Prerequisite, Spanish 3-4. Credit: 1 course.

A general survey of Spanish literature up to the end of the 17th century. Readings from the picaresque novels and the drama of the Siglo de Oro. *Five hours a week, every quarter.* Professors Adams, Boggs, Stoudemire.

22. MODERN SPANISH LITERATURE. Prerequisite, Spanish 21. Credit: 1 course.

A general survey of Spanish literature from the end of the 17th century to the present day. Readings from representative authors. *Five hours a week, every quarter.* Professors Adams, Stoudemire.

25. COMMERCIAL SPANISH. Open to students in the School of Commerce only. Prerequisite, Spanish 21. Credit: 1 course.

The object of this course is to give the student practical training in modern Spanish. Newspapers and magazine articles dealing with the life and customs

* An undergraduate major in Spanish consists of the following eight courses: Spanish 22; 109; 110; 111; 131; 132; 134 or 135; and 145.

of South America are read. Practice in commercial correspondence. This course is largely conducted in Spanish. *Five hours a week, winter or spring quarter.* Professor Leavitt.

Courses for Graduates and Advanced Undergraduates

109. EARLY SPANISH PROSE FICTION. Prerequisite, Spanish 22. Credit: 1 course.

A study of the origins and developments of the novel in Spain up to the time of Cervantes. (1934-1935 and alternate years). *Five hours a week, fall quarter.* Professor Adams.

110. THE SPANISH NOVEL—1605-1898. Prerequisite, Spanish 22. Credit: 1 course.

A survey of the novel from Cervantes through the nineteenth century. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Adams.

111. MODERN SPANISH NOVELISTS. Prerequisite, Spanish 22. Credit: 1 course.

A study of the "Generation of '98," with consideration of present day tendencies. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Adams.

115. EARLY LYRIC POETRY. Prerequisite, Spanish 22. Credit: 1 course.

A survey of lyric poetry in the Spanish peninsula from the origins through the Siglo de Oro. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Adams.

116. MODERN LYRIC POETRY. Prerequisite, Spanish 22. Credit: 1 course.

Brief treatment of the poetical schools of Seville and Salamanca in the eighteenth century and study of Spanish lyric poetry through the nineteenth century to the present day. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Adams.

131. LOPE DE VEGA AND HIS CONTEMPORARIES. Prerequisite, Spanish 22. Credit: 1 course.

Reading of representative plays of Lope de Vega, Tirso de Molina, Guillén de Castro, Ruiz de Alarcón, etc. Lectures and reports. (1935-1936 and alternate years.) *Five hours a week, fall quarter.* Professor Leavitt.

132. CALDERON AND HIS CONTEMPORARIES. Prerequisite, Spanish 22. Credit: 1 course.

Reading of representative plays of Calderón de la Barca, Moreto, Rojas, etc. Lectures and reports. (1935-1936 and alternate years.) *Five hours a week, winter quarter.* Professor Leavitt.

134. SPANISH DRAMA OF THE NINETEENTH CENTURY. Prerequisite, Spanish 22. Credit: 1 course.

Reading of representative plays of this period. Lectures, oral and written reports. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Leavitt.

135. MODERN SPANISH DRAMA. Prerequisite, Spanish 22. Credit: 1 course.

Reading of plays of Dicenta, Benavente, Linares Rivas, the Alvarez Quintero brothers, Marquina, Martinez Sierra, etc. Lectures, oral and written reports. (1934-1935 and alternate years.) *Five hours a week, winter quarter.* Professor Leavitt.

145. SPANISH PHONETICS. Prerequisite, Spanish 21. Credit: 1 course.
A detailed study of the Spanish vowel and consonant sounds by the phonetic method. This course is required of candidates with a major in Spanish for the master's degree, and it should be elected by anyone who intends to teach Spanish. *Five hours a week, spring quarter.* Professor Boggs.

Courses Primarily for Graduates

221-222. OLD SPANISH. Credit: 2 courses.
Ford's *Old Spanish Readings.* The Poem of the Cid and other old Spanish texts. Lectures on phonology, morphology, and syntax. *Five hours a week, fall and winter quarters.* Professor Boggs.

241. INTRODUCTION TO SPANISH-AMERICAN LITERATURE. Credit: 1 course.
A study of notable authors and consideration of present-day writers. (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Leavitt.

391. EARLY SPANISH LITERATURE. Prerequisite, Spanish 221-222. Credit: 1 course.
Survey of Medieval Spanish Literature. *Five hours a week, spring quarter.* Professor Boggs.

393. SPANISH ROMANTICISM. Seminar course. Credit: 1 course.
General survey of the Romantic period in Spain and investigation of special problems. (Offered in 1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Adams.

395. RESEARCH. CREDIT: 1 course.
Reesarch in a special field under the direction of a member of the department.
Attention is called to General and Comparative Literature 157.

ITALIAN

Courses for Undergraduates

51. ELEMENTARY COURSE. Prerequisite, French 3-4 or Spanish 3-4. Credit: 1 course.
Grammar, pronunciation, oral and written exercises. Reading of modern Italian texts. *Five hours a week, fall quarter.* Professor Huse.

52. MODERN ITALIAN LITERATURE. Prerequisite, Italian 51. Credit: 1 course.
Continuation of Course 51 with reading from modern Italian poets, dramatists, and novelists. *Five hours a week, winter quarter.* Professor Huse.

Courses for Graduates and Advanced Undergraduates

131. DANTE. Prerequisite, Italian 51 and 52. Credit: 1 course.
The *Vita Nuova* and the *Inferno,* with some reference to origins of Italian literature and to the poets of the *dolce stil nuovo.* (1935-1936 and alternate years.) *Five hours a week, spring quarter.* Professor Huse.

132. DANTE. Prerequisite, Italian 131. Credit: 1 course.
The *Purgatorio* and the *Paradiso.* (1934-1935 and alternate years.) *Five hours a week, spring quarter.* Professor Huse.

156. DANTE IN ENGLISH TRANSLATION. Credit: 1 course.
The *Vita Nuova* and the *Divine Comedy;* the precursors of Dante and the poets of the *dolce stil nuovo.* Special studies of Dante's political and social

philosophy, with particular emphasis on Dante as a poet and as a guide. *Five hours a week, fall quarter.* Professor Huse.

161. ITALIAN LITERATURE OF THE RENAISSANCE. Prerequisite, Italian 51 and 52. Credit: 1 course.

Readings from the principal authors, with special emphasis on Ariosto, Machiavelli, Castiglione, and the lyric poets. Collateral reading on the history of Italian culture during the Renaissance. *Five hours a week, winter quarter.* Professor Huse.

Course Primarily for Graduates

221. OLD ITALIAN. Credit: 1 course.

Reading of the poets previous to Dante. Early monuments. Survey of phonology and morphology. (1934-1935 and alternate years.) *Five hours a week, fall quarter.* Professor Holmes.

DEPARTMENT OF RURAL SOCIAL ECONOMICS

Professor HOBBS; Associate Professor WAGER.

Courses for Undergraduates

51-52. RURAL ECONOMICS. Credit: 2 courses.

A general course in the principles and problems of rural economy, with special attention given to the economics of agriculture in North Carolina and the South. References: Gray's *Agricultural Economics;* Taylor's *Outlines of Agricultural Economics;* Yoder's *Introduction to Agricultural Economics. Five hours a week, fall and winter quarters.* Professor Hobbs.

53. HISTORY OF AGRICULTURE. Credit: 1 course.

This course traces the development of agriculture from its earliest beginnings to the present: earliest beginnings; Greece and Rome; later agriculture in Europe; American agriculture. References: Gras, *A History of Agriculture;* Schmidt and Ross, *Readings in the Economic History of American Agriculture;* special readings. *Five hours a week, spring quarter.* Professor Hobbs.

61. AGRICULTURE COOPERATION. Credit: 1 course.

Lecture and research. History of agricultural coöperation, principles of coöperation, coöperative organization, rural credits, and coöperative marketing. *Five hours a week, winter quarter.* Professor Hobbs.

71. RURAL SOCIOLOGY. Credit: 1 course.

Rural Sociology. Text: Gillette's *Rural Sociology.* Collateral readings: Galpin's *Rural Life;* Butterfield's *Chapters in Rural Progress;* Sorokin and Zimmerman's *Principles of Rural-Urban Sociology. Five hours a week, fall quarter.* Professor Wager.

72. RURAL SOCIOLOGY. Credit: 1 course.

Country Life Problems. Text: Taylor's *Rural Sociology.* Collateral readings: Boyle's *Rural Problems in the United States,* Galpin's *Rural Social Problems,* Butterfield's *The Country Church and the Rural Problem. Five hours a week, winter quarter.* Professor Wager.

73. RURAL SOCIOLOGY. Credit: 1 course.

The Rural Community. Text: Sims' *Elements of Rural Sociology.* Collateral readings: Hawthorne's *The Sociology of Rural Life,* Haye's *Rural Community Organization,* Miller's *Town and Country,* Wilson's *Evolution of the Country Community,* Sims' *The Rural Community,* Steiner's *The American Community in Action. Five hours a week, spring quarter.* Professor Wager.

91, 92, 93. LABORATORY COURSE IN RURAL ECONOMICS AND SOCIOLOGY. Corequisite, 51-52 or 71, 72, and 73. Credit: 1 course each quarter.

Home-state studies, home-county studies, research projects and surveys. Hours arranged to suit the convenience of the student. *Nine hours laboratory and one hour seminar a week, fall, winter, and spring quarters.* Professors Hobbs, Wager.

95, 96, 97. LABORATORY COURSE ON THE HOME COUNTY. Credit: 1 course each quarter.

Studies in the economic and social conditions of the home county with a view to the publication of a county survey or a county geography supplement. Arranged especially to meet the needs of county organizations at the University. Hours arranged to suit the convenience of the student. *Nine hours laboratory and one hour seminar a week, fall, winter, and spring quarters.* Professor Wager.

Courses for Graduates and Advanced Undergraduates

101. NORTH CAROLINA: ECONOMIC AND SOCIAL. Credit: 1 course.

This course is designed to familiarize the student with North Carolina: population, agriculture, resources, social life, economic development, industry, wealth, taxation, education, public welfare. *Five hours a week, fall or spring quarter.* Professor Hobbs.

134. COUNTY GOVERNMENT AND ADMINISTRATION. Credit: 1 course.

A study of the forms of organization, the functions, and the operation of county government in the United States and especially in North Carolina in their historical development, but with special emphasis on present conditions and tendencies and on possible improvements. Each student will be required to study as intensively as possible the government and administration of one county, preferably his home county, and to put his results into essay form. Textbooks, lectures, and readings. *Five hours a week, winter quarter.* Professor Wager.

Courses for Graduates

271abc. RURAL SOCIAL PROBLEMS. Credit: 1 course each quarter.

Designated readings on and class discussions of (1) the solitary farmstead and the country community, (2) farm tenancy, (3) country illiteracy, (4) the country school, (5) the country church, and (6) rural citizenship. *Five hours a week, fall, winter, and spring quarters.* Professor Hobbs.

301abc. RURAL ECONOMICS. Credit: 1 course each quarter.

Research, seminars, and field investigations in (1) land economics—resources, values, ownership and tenancy, laws and policies; (2) farm organization and management—farm systems, farm finance, distribution of farm products and the farm income, coöperative farm enterprise; (3) country wealth, country institutions and problems; (4) state and county studies, economic, social, and civic; county bulletins, etc. Required preliminary preparation: approved courses in general and rural economics. Lacking such preparation, collateral courses in these subjects must be taken in residence here. *Five hours a week, fall, winter, and spring quarters.* Professors Hobbs, Wager.

305. SEMINAR IN COUNTY ADMINISTRATION. Credit: 1 course.

Research, reading, and conferences on special phases of county organization and administration. Typical subjects for intensive study might be: county consolidation, county management, assessment of property, tax delinquency, county planning. Prerequisite, rural social-economics 134 or two courses in government. *Five hours a week, fall, winter, or spring quarter.* Professor Wager.

311abc. RURAL SOCIAL PROBLEMS. Credit: 1 course each quarter.
1. Research, seminars, and field investigations of (1) rural social institutions and agencies; (2) transportation and communication facilities in rural areas; (3) country-mindedness and its sequences; (4) town and country interdependencies; (5) social disability in country areas, our public welfare laws and agencies; (6) social aspects of tenancy and illiteracy; (7) state and county studies, economic, social, and civic; county bulletins, etc. 2. Rural Social Surevy; research, technic, and field work. 3. Statistics; interpretation and use. 4. Rural Social Engineering: (1) county community studies; (2) community organization, economic and social; (3) county government; (4) country leadership, requisites and technic. Required preliminary preparation: approved courses in general and rural sociology. Lacking this, collateral courses in these subjects must be taken in residence here. *Five hours a week, fall, winter, and spring quarters.* Professors Hobbs, Wager.

DEPARTMENT OF SOCIOLOGY

Professors ODUM, MEYER; Research Professors GROVES, WOOFTER; Assistant Professor BROOKS; Research Associates JOHNSON, VANCE, (Institute for Research in Social Science).

Courses for Undergraduates

(NOTE: Students with one elective course in sociology may take either Sociology 41 or 42. For majors in the Department Sociology 41 and 42 are prerequisites. For Sociology 62 no prerequisite is required except senior standing or its equivalent.)

41. INTRODUCTION TO SOCIOLOGY. Credit: 1 course.
Emphasis on social origins as found in primitive society; the rise of contemporary society; the forces shaping society studied through geographical, biological, psychological, and cultural approaches; social organization and control; the elements of social theory. *Five hours a week, every quarter.* Professor Brooks.

42. SOCIAL PROBLEMS. Credit: 1 course.
A general course giving primary emphasis to positive features and secondary consideration to the pathological aspects of society. The student is introduced to various social problems and institutions such as race, immigration, the family, and the community, which can be pursued more intensively in other specialized courses in this department. *Five hours a week, every quarter.* Professor Meyer.

62. MARRIAGE. Open to senior men students. Credit: ½ course.
A discussion of the practical problems of marriage, parenthood, and family adjustment. *Three hours a week, spring quarter.* Professor Groves.

Courses for Graduates and Advanced Undergraduates

151. SOCIAL ANTHROPOLOGY. Credit: 1 course.
A general course in social anthropology, but with some attention to physical anthropology and archaeology. The nature of culture; culture processes; the modern cultural environment; and social change. *Five hours a week, spring quarter.* Professor Johnson.

152. SOCIAL THEORY. Credit: 1 course.
A survey of the range of contemporary social theory with preliminary consideration of its historical backgrounds. A study is made of contributions to theories of human ecology, regionalism, population, social differentiation.

the social personality, mobility, human nature and culture, collective behavior, religion, art and the *mores*, the social processes, conflict, and social control. Leading theories are summarized, compared, and criticized. Required in all majors and of all candidates for graduate degrees. *Five hours a week, every quarter.* Professor Vance.

160. INTRODUCTION TO SOCIAL WORK. Credit: 1 course.
Essentially a professional course in social problems with the emphasis laid upon methods of treatment by public and private social agencies. After a brief discussion of the nature, purpose, and scope of social work the course will deal chiefly with the technical application of social work to the pathological problems, such as poverty and destitution, physical and mental deficiency, disease, crime, and delinquency. Methods of education and training for social work will also be taken up in considerable detail. *Five hours a week, fall quarter.* Professor Sanders.

161. THE FAMILY. Credit: 1 course.
The history, purpose, and problems of the family with especial attention to social conditions influencing family life and to efforts for family conservation. Open to men and women. *Five hours a week, fall quarter.* Professor Groves.

168. THE URBAN COMMUNITY. Credit: 1 course.
1. A descriptive, analytic, and comparative study of urban structure and growth, with primary emphasis upon social planning in connection with such problems and programs as housing, delinquency areas, slum clearance, and recreation. 2. The community and social work; community organization, its origins, development, problems, and prospects. Large use will be made of recent literature in this field. *Five hours a week, winter quarter.* Professor Brooks.

171. EDUCATIONAL SOCIOLOGY. Credit: 1 course.
Education is a process of social control and achievement. The social resources of the school and other educational resources. Social problems of the teacher. *Five hours a week, winter quarter.* Professor Meyer.

173. PLAY AND RECREATION. Credit: 1 course.
The theories of play, play activities, attitudes, history of the play movement, play leadership, programs, values, sex and age differences, classification of movements, application to community life. *Five hours a week, winter quarter.* Professor Meyer.

175. EXTRA-CURRICULAR ACTIVITIES. Credit: ½ course.
Clubs, student participation in school government, physical education, publicity in school publications, commencement, many miscellaneous topics—the assembly, festival days, suggestions to leaders, home room activities, programs, dramatics, point systems, contributions from national agencies interested in extra-curricular activities, theoretical and practical studies of institutions promoting successful programs, bibliographical materials. *Three hours a week, spring quarter.* Professor Meyer.

185. THE NEGRO. Credit: 1 course.
A study of the American Negro, with particular reference to the South, the historical and cultural background of the Negro in Africa and in America; development since emancipation; bi-racial system; and problems of race relations. *Five hours a week, fall quarter.* Professor Johnson.

186. POPULATION. Credit: 1 course.
A study of problems of quality and quantity of population including theories of population increase, and problems of race, immigration, and eugenics. *Five hours a week, spring quarter.* Professor Woofter.

192. CRIME. Credit: 1 course.

Nature and causes of crime; evolution of modern methods of criminal procedure; administration of penal and reformatory institutions; programs for the social treatment of the criminal; the problems of juvenile delinquency. The class work will be supplemented by field trips to criminal courts and penal institutions. *Five hours a week, winter quarter.* Professors Brown, Brooks.

193. SOCIAL PATHOLOGY. Credit: 1 course.

The content and method of this course provide for careful coördination with courses on crime, juvenile delinquency, and general social problems. Its emphasis therefore is on poverty and relief. Minor but intensive study will be given to such social ills as mental defect and disease, alcoholism, prostitution, and vagrancy. Emphasis is given to methods of treatment by private and public institutions and agencies. Class work is supplemented by field trips to county and state institutions. *Five hours a week, fall quarter.* Professors Meyer, Brown.

198. JUVENILE DELINQUENCY. Credit: 1 course.

This course deals with the diagnosis and treatment of juvenile delinquency from the social worker's viewpoint. Under diagnosis will be taken up the methodology of the social scientists in this field, and the evaluation of the different causative factors of juvenile delinquency. Under treatment will be covered the work of the juvenile court, probation, parole, and institutional care. *Five hours a week, fall quarter.* Professor Sanders.

Courses Primarily for Graduates

208. METHODS IN SOCIAL RESEARCH. Credit: 1 course.

Outines of social research including the spirit of scientific research, social research, and the new alignment of the social sciences; the historical approach to the social sciences; the qualifications of the social research specialist; the divisions and general methods of social science; types of method and approach; the statistical, the survey, the experimental, the case; the biological, the psychological, the anthropological or comparative, the historical. The range of general sources, research agencies, and groups, reading and bibliography as tools, the utilization of notes and records, schedules, questionnaires, and forms, common sense technique, preparation of manuscript and publication, examples of social research, and bibliographies. *Five hours a week, fall quarter.* Professor Odum.

209. SOUTHERN REGIONAL SOCIAL PROBLEMS. Credit: 1 course.

An extended survey of the field of regional social problems in the Southern States classified and grouped under certain sociological categories and physical backgrounds, cultural patterns, processes of social change, social incidence, individual and social differentiation, institutions and leadership, social programs, social science, and social research. Topical analysis and extensive questions supplemented with concrete data and special thorough study of given selected problems. *Five hours a week, winter quarter.* Professor Odum.

201. FOLK SOCIOLOGY. Credit: 1 course.

A study of collective representations and processes attempting descriptive accuracy primarily through portraiture and analyses. The primary basis of the course will be concrete materials related to folk attitudes and cultures, ranging from primitive folklore and folk wisdom to regional culture patterns. The chief objective is an attempt to seek certain contributions to social theory as related to the building of cultures. *Five hours a week, spring quarter.* Professor Odum.

215. SOCIAL DEMOGRAPHY. Credit: 1 course.

The course attempts to synthesize the emerging concepts of culture and the region by depicting the resulting cultural landscape. The contributions of cultural anthropology, social geography, regional sociology, and human ecology are studied in an effort both to evaluate the socially significant factors of the environment and to arrive at a classification of regions, culture areas, and social types. The American South is used as a type study for the survey of regions in transition. *Five hours a week, spring quarter.* Professor Vance.

253. ADVANCED SOCIAL TECHNIQUE. Credit: 1 course.

This is a seminar course on the appication of statistical method to social phenomena. Required of all candidates for graduate degrees. *Five hours a week, winter quarter.* Professor Woofter.

327, 328, 329. GRADUATE RESEARCH SEMINARS. Credit: 3 courses.

Research in selected topics. *Five hours a week, fall, winter, and spring quarters.* Professor Odum.

331, 332, 333. GRADUATE RESEARCH SEMINARS. Credit: 3 courses.

Research in selected topics. *Five hours a week, fall, winter, and spring quarters.* Professor Groves.

341. SEMINAR. Credit: 1 course.

Individual research in a special field under the direction of a member of the department.

DEPARTMENT OF ZOÖLOGY

Professors WILSON, COKER; Associate Professor BEERS; Teaching Fellow CULBERTSON; Assistants MISS BOLIEK, MESSRS. ADDLESTONE, CARSON, ODUM.

Courses for Undergraduates

41a. FUNDAMENTALS OF ANIMAL BIOLOGY. Required accompanying course, Zoölogy 41b. Credit with 41b: 1 course.

Elements of anatomy, physiology, and classification of animals. *Three hours a week, fall or winter quarter.* Professor Coker.

41b. PRACTICAL STUDIES IN ANIMAL BIOLOGY. Required accompanying course, Zoölogy 41a. Credit: see 41a.

Dissection of animals and study of tissues, to give the foundation for an understanding of the organization and functions of vertebrate animals and especially of man. *One lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, $5.00.* Professor Coker; Assistants.

42a. DEVELOPMENT OF ANIMALS. Prerequisite, Zoölogy 41ab. Credit: ½ course.

Basic facts and theories of individual development, heredity, and evolution. *Three hours a week, spring quarter.* Professor Wilson.

42b. INVERTEBRATE ZOÖLOGY. Prerequisite, Zoölogy 41ab. Credit: ½ course.

Study of invertebrate animals as examples of the varied forms of life and as concrete illustrations of the principles of biology. Field trips are made for the purpose of observing animals in nature. *One lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Professor Coker; Assistants.

Courses for Graduates and Advanced Undergraduates

103. COMPARATIVE ANATOMY OF VERTEBRATES. Prerequisite, Zoölogy 41ab and 42ab. Credit: 1 course.

Dissection of types especially amphioxus, petromyzon, fish, fowl, rabbit. Laboratory work with occasional lectures. *Ten laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Professor Beers.

104. COMPARATIVE EMBRYOLOGY OF VERTEBRATES. Prerequisite, Zoöogy 41ab and 42ab. Credit: 1 course.

Maturation and fertilization phenomena in some invertebrate types; segmentation and formation of germ layers in frog and teleost fish; germ layers and development of characteristic vertebrate organs in chick; essentials of microscopic technique. Laboratory work with occasional lectures. *Ten laboratory hours a week, winter quarter. Laboratory fee, $5.00.* Professor Beers.

105. COMPARATIVE HISTOLOGY OF VERTEBRATES. Prerequisite, Zoölogy 104. Credit: 1 course.

Microscopic preparations of selected tissues and organs are made from the fresh animal and studied with the help of texts and original papers. Laboratory work with assigned reading and seminar reports. *Ten laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Professor Beers.

106-107-108. MORPHOLOGY AND CLASSIFICATION OF THE INVERTEBRATES. Prerequisite, Zoölogy 41ab and 42ab. Credit: 3 courses.

Dissection and microscopic study of types of the chief orders, with some consideration of life histories; systematic diagnosis. Laboratory work with occasional lectures. *Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00.* Professor Wilson.

109. INTRODUCTION TO HYDROBIOLOGY. Prerequisite, Zoölogy 41ab and 42ab. Credit: 1 course .

A study of animal life in water, with special reference to the relation of animals to each other and to their environments. Field and laboratory work, lectures, reading of special papers, discussions. *Ten laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Professor Coker.

110. PARASITOLOGY (MEDICAL ZOÖLOGY). Prerequisite, Zoölogy 41ab and 42ab. Credit: 1 course.

A consideration of the structure, classification, and life histories of the protozoa and worms of medical importance and of the arthropods which either cause desease directly or which transmit the bacteria, protozoa, and worms of disease. *Lectures and demonstrations, five hours a week, winter quarter.* Professor Beers.

Courses Primarily for Graduates

209-210-211. GENERAL EMBRYOLOGY AND REGENERATION. Credit: 3 courses or more.

Embryology and regeneration in the lower metazoa and simpler vertebrates. *Not less than ten laboratory hours a week, fall, winter, and spring quarters. Seminar reports. Laboratory fee, $5.00 a quarter.* Professor Wilson.

212-213-214. HYDROBIOLOGY. Prerequisite, Zoölogy 109. Credit: 3 courses.

The study of aquatic organisms and enrivonments, with attention restricted to a particular topic, as a small group of animals, a limited set of habitats, or special phenomena of behavior. The work is on the border line of research, involving critical examination of literature, as well as field and laboratory study and seminar reports. *Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Coker.

215. PROTOZOÖLOGY. Credit: 1 course.

Special study of the protozoa living in man and lower animals, with consideration of host-parasite relationships and with comparative studies on a few free-living forms. Laboratory work with occasional lectures, assigned readings, and seminar reports. *Ten laboratory hours a week, fall or spring quarter. Laboratory fee, $5.00.* Professor Beers.

316. RESEARCH. Credit: ½ or 1 course or more.

Under this heading may be credited the work of a single quarter or that of one or more years. *Six or ten or more laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 or $5.00.* Professor Wislon or Professor Coker or Professor Beers.

PART FOUR

THE DIVISION OF ADMISSIONS AND RECORDS
THE DIVISION OF STUDENT WELFARE
THE COLLEGE OF LIBERAL ARTS
THE SCHOOL OF APPLIED SCIENCE
THE SCHOOL OF ENGINEERING
THE SCHOOL OF COMMERCE
THE SCHOOL OF PUBLIC ADMINISTRATION
THE GRADUATE SCHOOL
THE SUMMER SCHOOL
THE UNIVERSITY EXTENSION DIVISION

THE DIVISION OF ADMISSIONS AND RECORDS

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Thomas James Wilson, Jr., Ph.D., *Dean.*

*THE ADMINISTRATIVE BOARD

Allan Wilson Hobbs, Ph.D.
James Munsie Bell, Ph.D.
†Herman Glenn Baity, Sc.D.
Dudley deWitt Carroll, M.A.
Francis Foster Bradshaw, Ph.D.
Robert Burton House, A.M.

GENERAL STATEMENT

Since the conclusion of the World War the University has experienced such a growth both in numbers and in breadth of policy and influence that it has been found necessary in many ways to revise and modify previously existing modes of action. From this influence came in March, 1920, the proposals of the University Advisory Committee with reference to the more definite organization of separate schools or faculties and the establishment of administrative boards for these separate schools. The proposals were adopted.

After about ten years it was generally felt that developments subsequent to the above action had led to practices and procedures not in strict accord with the plans adopted in 1920. After full investigation and discussion by the Advisory Committee and the Adminis-

* In matters involving any of the schools of Law, Medicine, Pharmacy, the Graduate School, the School of Public Administration, or the School of Library Science the Dean or Director of the school concerned will sit as an active member of the Administrative Board.
† Absent on leave, 1933-1934.

trative Officers of the University new regulations designed to make effective the original legislation of 1920 were proposed to the General Faculty and were adopted.

By these regulations the Special Faculties of Law, Medicine, Pharmacy, Engineering, and of the Graduate School and the Undergraduate Faculty were definitely provided and their jurisdictions, powers, and duties were defined. At the same time were settled the status, powers, and duties of the Administrative Boards of all schools and divisions. See Catalogue for 1930-1931, page 30 and following.

The division named at the head of this section was organized in 1931 for the purposes indicated by its title in order still further to organize and make more effective existing agencies for the promotion of the good of the University. This division was at first appointed (and with a somewhat different personnel) as the Committee on Admissions, with instructions to investigate and discuss conditions along this line and to make a report to the President.

Following the formal report made on the deliberations and recommendations of the above committee the work was felt to be of enough importance to justify the organization of a division with a dean and administrative board and with a province embracing not only matters of admissions but those of general administration also. In the matter of admissions it is expected that the Administrative Board of this division will at its regular and special meetings continually keep a live and constructive interest in the establishment of policies and plans for improving the quality of our student body.

The other part of the work of the division is concerned with the general administration of the regulations of the University as they apply to students in the College of Liberal Arts and the other undergraduate divisions. Without a central body to control and direct this, inconsistencies in administration and decided variations in the application of regulations necessarily result. It is expected that the Dean with the help of the Administration Board will settle matters of general administration with fairness and at the same time with sympathetic justice.

THE DIVISION OF STUDENT WELFARE

GENERAL STATEMENT

The Division of Student Welfare is established to coördinate and promote the work of all University agencies and organizations affecting the welfare of students. Its work is understood to embrace all University relationships with students other than formal instruction. These relationships all have educational significance and are recognized as an integral part of the educational program of the University.

In recent years of University growth many agencies have come into existence to promote in various ways the wholesome growth of students and student life. To relate most effectively the respective functions of such agencies and to focus the entire guidance resources of the institution on the particular needs of students both as individuals and as groups is the responsibility of this division through its Administrative Board.

*THE ADMINISTRATIVE BOARD

Allan Wilson Hobbs
Mrs. Marvin Hendrix Stacy
Dudley deWitt Carroll
Charles Thomas Woollen
Robert Burton House
William Morton Dey
William Stanley Bernard
English Bagby
Harry Fulcher Comer
Walter Reece Berryhill
Robert Baker Lawson
Robert Allison Fetzer
J. Maryon Saunders
Robert Mayne Albright
Francis Foster Bradshaw, *Chairman*

Because of the intimate relationship of this division to student life, there is an Advisory Board composed of students appointed annually by the President of the University on the joint nomination of the President of the Student Body and the Chairman of the Board. The following students were appointed for 1933-1934:

Bryson Irvin Boyle
Claiborn McDowell Carr, Jr.
Edwin Sidney Lanier
Virgil Stowe Weathers
Rufus Adolphus Pool
Joseph J. Sugarman
John M. Acee
Miss Janie R. Jolly
Orin Haywood Weeks
Harper Barnes, *Chairman*

* The President and the Dean of Admissions are *ex officio* members of this Administrative Board.

THE COLLEGE OF LIBERAL ARTS

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Allan Wilson Hobbs, Ph.D., *Dean.*

*THE ADMINISTRATIVE BOARD

George Howe, Ph.D.
William Frederick Prouty, Ph.D.
Marion Rex Trabue, Ph.D.
Mitchell Bennett Garrett, Ph.D.
Millard Breckenridge, Ph.B., LL.B.
Howard Russell Huse, Ph.D.
Corydon Perry Spruill, A.B., B.Litt. (Oxon.)
George Raleigh Coffman, Ph.D.

REQUIREMENTS FOR ADMISSION

See page 41.

EXPENSES

See pages 44-47.

GENERAL STATEMENT

Historical Background

From the earliest founding of higher education in America, Colleges of Liberal Arts have played a responsible and major part in the training of citizens for the varied activities of life. For many years prior to our recent enthusiasm for specialization these colleges were the only form of higher education, the belief being that a man trained adequately in intellectual *habits* and given a sufficient cultural background had the best possible equipment for entering life and the professions. In recent years with the intense specialization of careers and the narrowing of departments of thought, the college has stood for the more liberalizing courses, as distinguished from specialized vocational or professional training, in the conviction that a trained mind is still a desideratum in contemporary life.

The position of the College of Liberal Arts at the University of North Carolina is analogous to that of similar colleges in others of America's better institutions—it is the original unit of education from which other schools have sprung.

In brief, it must be said that the purpose of the College of Liberal Arts is to secure for the students intellectual development and intelligent action through the pursuit of learning which is of three types: preparatory, cultural, and vocational. And the end towards which these studies point is a development of all inherent powers, the discovery of latent capacities, and the ability to express intelligently one's own will, one's own ideas, and one's own emotions. From a full use of these opportunities should result a greater enrichment of the individual life and a more intelligent, a more thoughtful citizenship.

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF ARTS

The curriculum leading to the degree of Bachelor of Arts is designed to provide a general, well-rounded, liberal education.

In order to be recommended for the degree a student must pass satisfactorily and in accordance with the qualitative standard in force thirty-six whole courses or equivalent including the prescribed subjects listed below and elective subjects in accordance with the requirements stated. In his senior year each student must also pass a comprehensive examination in the field of his major study. In case required freshman courses are taken after the student begins his seventh quarter or required sophomore courses are taken after he begins his tenth quarter, half credit only is allowed.

In the first two years the student pursues a more or less definite curriculum in the following subjects:

English, three and one-half courses; foreign languages, three courses above the elementary courses in each of two languages; history, one and one-half courses; mathematics, two courses; science, two courses; elective, three courses.

Beginning with the junior year the work is on an elective basis, providing what is deemed a proper amount of concentration in study and, at the same time, a certain distribution of subjects.

Students who expect at some time to carry out investigation in any science or scientific profession, such as medicine or engineering, are earnestly recommended to enter upon their senior year with a reading knowledge of German and French. Class work in these subjects should have included at least four courses in German and two in French.

Attention is called to the curricula leading to A.B.-LL.B. (Part Five), the A.B. in Journalism, and the A.B. in Music, and to the work outlined for Degrees with Distinction.

Certain work in the School of Law or the School of Medicine may be counted towards the degree of Bachelor of Arts. The interested student should consult the Dean of the College of Liberal Arts or the Registrar of the University.

Freshman Year

English 1-2-3	*Select two languages	Greek†
Mathematics 1-2		Latin‡
History 1-2-3		French 3-4
		German¶
		Spanish 3-4

* It is expected that the languages in which the student presented high school credit are to be continued here. If other languages are chosen, it is necessary to take a greater number of courses to complete the requirements in foreign languages.

† Greek 13 and 14 are to be taken if the equivalent of Greek 1-2 has been offered at entrance. Note that Greek through course 21 is required to complete the sophomore requirement in this language.

‡ Latin 15 and 16 are to be taken if 4 units in Latin have been offered at entrance, Latin 2 and 15 if 3 units have been offered at entrance, Latin 1 and 2 if 2 units have been offered at entrance. In the last instance Latin 15 is to be taken in the sophomore year. Students who have offered 3 or 4 units are required to take 2 courses of college grade; those who have offered 2 units must take 3 such courses.

¶ German 3-4 is to be taken if the equivalent of German 1-2 has been offered at entrance. Note that German 3-4 and an additional course (21 or 22) are required to complete the sophomore requirement in this language.

By postponement of any of these double courses until the sophomore year, a double course in science (Botany 1, 43; Chemistry 1-2; Zoölogy 41-42; Geology 11-12; Botany 1 and Zoölogy 41) may be taken in the freshman year. See above, however, for reduction of credit in case freshman courses are taken after the student begins his seventh quarter.

First year students may take not more than three courses in any one quarter except by special permission of the Dean.

Sophomore Year

English 21-22

Select one:
- Botany 41, 43
- Chemistry 1-2
- Geology 11-12
- Physics 21-22
- Psychology 21-22
- Zoölogy 41, 42
- Botany 41 and Zoölogy 41

*Continue two languages:
- Greek
- Latin
- French 21
- German 21
- Spanish 21

Elective, 3 courses (see below)

†Sophomore Electives

Botany 41, 43
Chemistry 1-2
Economics 11, 31-32, 35
English 41, 42, 44, 45, 50, 81, 82, 91
French 3-4, 21, 22
Geology 11-12
German 3-4, 21, 22
Greek 13, 14, 21, 53, 58
Government 17, 21, 22
History 12, 41-42, 45-46, 47-48
Latin 15, 16, 22, 51, 71
Mathematics 13, 24, 25
Philosophy 41
Physics 21-22
Psychology 21-22
Sociology 41, 42
Spanish 3-4, 21, 22
Zoölogy 41, 42

If a course in science has been taken in the freshman year, the freshman course then postponed must be taken in place of the course in science required of sophomores.

Not more than three whole courses and one half course may be taken in any one term except by special permission of the Dean. In case permission for extra work has been granted, a report of deficient on any course may necessitate the dropping of that course.

SYSTEM OF ELECTIVES

For the purpose of providing the necessary concentration and distribution of electives in the junior and senior years, the student is required to elect one major field of study. The head of this major department (or his authorized representative) then controls the student's work for both his major and minor. The student is required to pass 6 to 8 courses in his major department and 3 or 4 courses in a second (or minor) department to be specified by the adviser in his major subject.

Junior Year

A junior shall pursue elective studies amounting to nine courses, chosen according to the following regulations:

* See footnotes on page 174.

† The three elective courses must be chosen from this list and cannot be courses used by the student to meet any other requirements. Note that, if only two courses in Latin are required, the number of sophomore electives becomes four instead of three.

Each student is required to elect, in each quarter, either three whole courses or two whole courses and two half courses. A student will be permitted to take not more than three whole courses and one half course in any one quarter, except by permission of the Dean, and in no case will he be permitted to pursue more than four courses at one time, except by special permission of the Administrative Board. In case permission for extra work has been granted, a report of deficient on any course may necessitate the dropping of that course.

One department from among the various departments in the college must be selected for concentrated study. This is known as the *major* department. Not fewer than three courses nor more than five courses may be elected in this department in the junior year. The courses are to be decided upon only after consultation with the head of the department. It lies within the discretion of the head of the department whether these courses shall be prescribd in his own department, or any part of them in allied departments.

The remaining courses (four to six) are free electives, subject only to the restriction that one or two courses must be chosen from a department representing the student's *minor*. This choice should be made with a view to the continuance of the same subject in senior year (see senior requirements) and under the direction of the head of his major department.

The remaining courses, if any, shall be free electives in any courses open to juniors.

Senior Year

A senior shall pursue elective studies amounting to nine courses, chosen according to the following regulations:

Each student is required to elect, in each quarter, either three whole courses or two whole courses and two half courses. A student will be permitted to take not more than three whole courses and one half course in any one quarter, except by permission of the Dean, and in no case will he be permitted to pursue more than four courses at one time, except by special permission of the Administrative Board. In case permission for extra work has been granted, a report of deficient on any course may necessitate the dropping of that course.

A senior shall continue in the department of concentrated study begun in the junior year, known as his *major*. Not fewer than three courses nor more than five courses may be elected in this department in the senior year. The courses are to be decided upon only after consultation with the head of the department. It lies within the discretion of the head of the department whether these courses shall be prescribed in his own department, or any part of them in allied departments.

The remaining courses (four to six) are free electives, except that enough courses must be chosen in his *minor* department, in which a course has already been elected in his junior year, to complete the *minor*.

Before being eligible for a degree, a senior must pass to the satisfaction of his major department, a comprehensive examination in the subject of his major. This examination will normally be given in the winter quarter of the senior year.

CURRICULUM LEADING TO THE DEGREE OF A.B. IN JOURNALISM

The course of study for the first two years is the same as that required of all other candidates for the A.B. degree.

The following twelve and one-half courses are specified in the junior and senior years:

English 52 or 53 or 54
Economics 31-32
Government 21 and 131
History 47-48 or 161-162
Commerce 161 or Psychology 136
Four and one-half courses in Journalism.

Five and one-half courses elective are to be chosen. The following list is suggested, but the student may make other selections provided he secures the consent of the head of the department of Journalism.

Economics 11, 141, 191, 195
English 52, 53, 54, 82, 143
An advanced elective in one foreign language
Geology 53
Library Administration 121
Philosophy 56 or 57 or 131-132-133

CURRICULUM LEADING TO THE DEGREE OF A.B. IN MUSIC

Students applying for admission to advanced standing in the curriculum leading to A.B. in Music must report to the Department of Music on the opening day of registration for evaluation of previous experience in Applied Music. This experience should represent the study of piano, or organ, or singing or orchestral instrument, throughout several years, together with participation in ensemble (band, orchestra, or glee club). The Department of Music reserves the right to refuse admission to a student whose musical background is deficient.

The following courses are prescribed for the first two years:

Engish 1-2-3, 21-22
Foreign Language, 6 courses (3 courses above the elementary courses in each of two foreign languages)
History 1-2-3
Music, the following courses: 1, 3-4-5, 21-22-23, 24-25-26.

During the junior year Psychology 21 and 22 are required. During the junior and senior years nine courses in music are required. Of these nine courses six are in theoretical music, Music 81-82-83 (Applied Music) being counted *at the end of the senior year* for three courses. See page 145 for explanation of Music 81-82-83.

DEGREES WITH DISTINCTION

Honors of two grades, *Honors* and *Highest Honors,* will be awarded at Commencement to those candidates for the degree of Bachelor of Arts who have done distinguished work in a group of related subjects. Every candidate for Honors must register before the end of the first quarter of his junior year with the Dean of the College of Liberal Arts. He shall file a statement, properly approved, of the courses which he proposes to elect, and these electives shall be such as to show a unified plan and to provide for a field of concentrated study involving, as a rule, two departments within the division in which his major work lies. In connection with the regular courses, candidates are expected to do, in term-time and in vacations, a considerable amount of additional reading, or such other supplementary work as may be prescribed by the department. In every case such additional work must be closely related to the general plan of study adopted by the candidate. Students will have the guidance and assistance of special instructors, and small groups will be formed for the discussion of the reading and of the courses. This tutorial assistance will be entirely independent of the conduct of the courses, the object being to stimulate interest in reading not required as a part of the regular class work for its cultural value rather than for direct preparation for examinations.

Besides the careful organization of the plan of study and the conferences, a thesis and a final oral examination are required. The thesis need not necessarily be a contribution to knowledge, but is designed to show the ability of the student to use his knowledge with intelligence and to interpret facts and his personal reaction upon the material studied in the courses or derived from the supplementary reading. The examination will test the candidate's knowledge of the whole field of concentrated study, and will also test his proficiency in a special topic, within the general field. The aim of the entire plan of study is thus to secure, as far as possible, a conception of a field of learning as a unity; to prevent, through the various measures named above, undue emphasis on the separate courses as independent units; and to lay the foundation for right methods through concentrated study in some part of the field.

The administration of the Honors courses is vested in a Committee on Degrees with Distinction, which consists of representatives from each of the three divisional groups into which the Faculty of the College of Liberal Arts is divided. At present Honors are offered in the Division of Languages and Literature and in the Department of History and Government.

THE SCHOOL OF APPLIED SCIENCE

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
James Munsie Bell, Ph.D., *Dean.*

*THE ADMINISTRATIVE BOARD

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Otto Stuhlman, Jr., Ph.D.
Charles Staples Mangum, A.B., M.D.

REQUIREMENTS FOR ADMISSION

See page 41.

EXPENSES

See pages 44-47.

CURRICULA FOR THE DEGREE OF BACHELOR OF SCIENCE

In order to be recommended for the degree of Bachelor of Science in this School the student must have passed satisfactorily in all the studies required in one of the following curricula outlined in this department. Each curriculum combines instruction in certain sciences and their application to the arts, with certain other general studies deemed essential to a liberal education. These curricula are designed to furnish the fundamental instruction for some of the technical professions. The curricula leading to the degree are three in number, as follows:

Bachelor of Science in Chemistry.
Bachelor of Science in Medicine.
Bachelor of Science in Geology.

In case required freshman courses are taken after the student begins his seventh quarter or required sophomore courses are taken after he begins his tenth quarter, half credit only is allowed.

Besides the curricula leading to degrees as shown above, this School offers curricula preparatory to the study of medicine and of dentistry. Outlines of the curricula leading to degrees and of these premedical and predental curricula are given below.

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.

BACHELOR OF SCIENCE IN CHEMISTRY

FRESHMAN YEAR

Fall Quarter: Chemistry 1, Mathematics 1, English 9a.
Winter Quarter: Chemistry 2, Mathematics 2, English 9b.
Spring Quarter: Chemistry 31, Chemistry 6, Mathematics 13, English 9c.

SOPHOMORE YEAR

Fall Quarter: Chemistry 41, Chemistry 51, Mathematics 24, English 21.
Winter Quarter: Chemistry 42, Chemistry 61, Mathematics 25, Physics 21.
Spring Quarter: Chemistry 43, Chemistry 62, Physics 22, English 22.

JUNIOR YEAR

Fall Quarter: Chemistry 81, Chemistry 163, Geology 43.
Winter Quarter: Chemistry 82, Chemistry 91, Geology 44.
Spring Quarter: Chemistry 66, Chemistry 86, Chemistry 92, Elective.

SENIOR YEAR

Fall Quarter: Chemistry 121, Chemistry 191, Elective.
Winter Quarter: Chemistry 122, Chemistry 192, Elective.
Spring Quarter: Chemistry 123, 2 Elective Courses.
Suggested Electives: Chemistry 71, 93, 101, 164, 165, 167, 168, 183, 184.

BACHELOR OF SCIENCE IN MEDICINE

NOTE: Students pursuing the academic subjects listed below are hereby notified that the completion of these courses does not necessarily mean admission to our School of Medicine. From the rather long list of applicants are chosen about forty who are deemed the most promising material for admission to our School. No arrangement exists for granting the degree of S.B. in Medicine for work in any medical school other than ours. Therefore, in order to secure our S.B. in Medicine, the student must complete the two years of work offered in our School of Medicine and in no other such school.

FRESHMAN YEAR

Fall Quarter: Botany 1, English 1, Mathematics 1, French 3 or German 3.*
Winter Quarter: Chemistry 1, English 2, Mathematics 2, French 4 or German 4.*
Spring Quarter: Chemistry 2, English 3, French 21 or German 21.

SOPHOMORE YEAR

Fall Quarter: Chemistry 31, French 22 or German 22, Zoölogy 41.
Winter Quarter: Chemistry 42, English 21, Physics 21.
Spring Quarter: English 22, Physics 22, Zoölogy 42.

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* See note * on following page.

JUNIOR YEAR

Fall Quarter: Psychology 21, †Elective, 2 courses.
Winter Quarter: Chemistry 61, Psychology 22, †Elective, 1 course.
Spring Quarter: Chemistry 62, †Elective, 2 courses.

BACHELOR OF SCIENCE IN GEOLOGY

FRESHMAN YEAR

Fall Quarter: Chemistry 1, English 1, Geology 11, Mathematics 1.
Winter Quarter: Chemistry 2, English 2, Geology 12, Mathematics 2.
Spring Quarter: Chemistry 31, English 3, French 3 or German 3 or Spanish 3‡.

SOPHOMORE YEAR

Fall Quarter: Botany 41, French 4 or German 4 or Spanish 4‡, Geology 43.
Winter Quarter: English 21, Geology 44, Physics 21.
Spring Quarter: English 22, Geology 41, Geology 47, Physics 22.
Summer Session: Geology 48-49 or equivalent.
NOTE. Each student is required to pass a test in place geography before beginning his junior year.

JUNIOR YEAR

Fall Quarter: Geology 121, ¶Elective, 2 courses.
Winter Quarter: Geology 122, ¶Elective, 2 courses.
Spring Quarter: Geology 51 or elective, ¶Elective, 2 courses.

SENIOR YEAR

Fall Quarter: Geology (elective), ¶Elective, 2 courses, Seminar.
Winter Quarter: Geology (elective), ¶Elective, 2 courses, Seminar.
Spring quarter: Geology (elective), ¶Elective, 2 courses, Seminar.

PREMEDICAL OR PREDENTAL CURRICULUM

(Suggested Two Year Curriculum)

FRESHMAN YEAR

Fall Quarter: Chemistry 1, English 1, **French 3 or German 3, Mathematics 1.

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* If French is not offered as an entrance credit, the elementary courses must be taken in the University without credit. The same principle applies to German. Note that this curriculum requires four courses of college grade work in French or German above the elementary courses 1 and 2, or two such courses in French *and* two such courses in German. In case both French and German are taken, note that the requirements are French through course 4 *and* German through course 4. In case only one language is taken, that language must be continued through French 22 or German 22 according to the language chosen.

† Note that five full courses of electives are required in addition to the courses prescribed above, making twenty-seven full courses of college work, exclusive of any elementary courses in French or German which may be taken to make up the entrance requirement in either language.

‡ If no modern foreign language was offered for entrance, the elementary courses 1 and 2 in one language must be taken in the University without credit, and these must be followed by courses 3 and 4 in the same language.

¶ All electives in both junior and senior years, must be chosen in conference with the instructor in charge of the student's special program of work: the electives are not free electives.

** See note † on following page.

Winter Quarter: Chemistry 2, English 2, †French 4 or German 4, Mathematics 2.

Spring Quarter: Botany 1, Chemistry 31, English 3.

SOPHOMORE YEAR

Fall Quarter: Physics 21, Psychology 21, Zoölogy 41.

Winter Quarter: Chemistry 61, English 21, Physics 22.

Spring Quarter: Psychology 22, Zoölogy 42, Elective, 1 course.

The curriculum outlined above is planned with the object of preparing a student in the shortest possible time to enter upon the study of medicine. It is not laid down as inflexible but is suggested to meet the requirements of Schools of Medicine which require only two years of academic work (sixty semester hours). Further work in physics and in organic chemistry should be taken in the summer following the completion of the above work if possible.

Students preparing for the study of dentistry are advised to follow the curriculum outlined above. It is recommended, however, that they secure at least the equivalent of one course in drawing. At present Schools of Dentistry vary as to entrance requirements from graduation from a high school to two years of college work. Those requiring one year of college work set as a minimum the completion of the following subjects in the amounts stated: Six semester hours in each of the following—English, general chemistry, biology, college physics (unless 1 unit was presented for entrance), and one subject from foreign language, history, mathematics, technical drawing. The remaining hours are free electives.

The curriculum outlined below, while not so complete as the two-year course above, is planned to meet the entrance requirements of schools of dentistry which admit students who have had one year of college work. If the applicant has presented one full unit of credit in physics from his high school, Physics 21-22 are not required but are strongly recommended. In case Physics 21-22 are not taken the student is required to take other courses of college grade in order to make his total credits sufficient to meet the requirement of thirty semester hours.

The predental student who has selected the dental school in which he desires to do his work should secure a catalogue of such school note well its requirements, and conform his predental training to them.

ONE YEAR PREDENTAL CURRICULUM

Fall Quarter: Chemistry 1, English 1, Mathematics 1.

Winter Quarter: Chemistry 2, English 2, Mathematics 2, Zoölogy 41.

Spring Quarter: Botany 1, English 3, Physics 21.

Summer Quarter: Chemistry 31, Physics 22.

† If neither French or German is offered for entrance, the elementary courses 1 and 2 in one language must be taken in the University without credit. Note that this curriculum requires French *or* German through course 4.

THE SCHOOL OF ENGINEERING

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
†Herman Glenn Baity, Sc.D., *Dean.*
William Jasper Miller, E.E., S.M.E.E., *Acting-Dean.*

*THE ADMINISTRATIVE BOARD

William Frederick Prouty, Ph.D.
Thomas Felix Hickerson, A.M., S.B.
Robert Digges Wimberly Connor, Ph.B.
Allan Wilson Hobbs, Ph.D.
Elmer George Hoefer, M.E.
William Jasper Miller, E.E., S.M.
Gustav Theodor Schwenning, Ph.D.
Almonte Charles Howell, Ph.D.
Alfred McLaren White, Sc.D.

SPECIAL STAFF

James Munsie Bell, Ph.D., *Smith Professor of Chemistry.*
Dudley DeWitt Carroll, M.A., *Professor of Economics.*
John Emery Lear, E.E., *Professor of Electrical Engineering.*
Thomas Felix Hickerson, A.M., S.B., *Professor of Civil Engineering.*
George McFarland McKie, A.M., *Professor of Public Speaking.*
Allan Wilson Hobbs, Ph.D., *Professor of Applied Mathematics.*
Elmer George Hoefer, M.E., *Professor of Mechanical Engineering.*
†Herman Glenn Baity, Sc.D., *Professor of Sanitary and Municipal Engineering.*
Karl Hartley Fussler, Ph.D., *Professor of Physics.*
James Talmadge Dobbins, Ph.D., *Professor of Chemistry.*
William Jasper Miller, E.E., S.M. in E.E., *Professor of Electrical Engineering.*
Gustav Theodor Schwenning, Ph.D., *Professor of Business Administration.*
Mitchell Bennett Garrett, Ph.D., *Professor of Modern European History.*
Arthur Simeon Winsor, Ph.D., *Associate Professor of Mathematics.*
Floyd Harris Edmister, Ph.D., *Associate Professor of Chemistry.*
Joe Burton Linker, Ph.D., *Associate Professor of Mathematics.*
Earle Keith Plyler, Ph.D., *Associate Professor of Physics.*
Almonte Charles Howell, Ph.D., *Associate Professor of English.*
George Wallace Smith, M.S.E., *Associate Professor of Engineering.*
Ralph McCoy Trimble, C.E., S.M., *Associate Professor of Civil Engineering.*

* The President, the Registrar, and the Dean of Students are *ex officio* members of the Administrative Board.
† Absent on leave, 1933-1934.

NEIL PHILLIPS BAILEY, M.S., *Associate Professor of Mechanical Engineering.*
ALFRED MCLAREN WHITE, Sc.D., *Associate Professor of Chemical Engineering.*
GAIL PHILLIPS EDWARDS, Ph.D., M.S.E., *Acting-Associate Professor of Municipal and Sanitary Engineering.*
MICHAEL ARENDELL HILL, A.M., *Assistant Professor of Mathematics.*
WILLIAM ANDERSON OLSEN, A.M., *Assistant Professor of English.*
LOFTON LEROY GARNER, A.M., *Assistant Professor of Mathematics.*
JAMES OSLER BAILEY, A.M., *Instructor in English.*
ARTHUR RUSSELL HOLLETT, S.M., *Instructor in Civil Engineering.*
RAYMOND FRANKLIN STAINBACK, S.M., *Instructor in Electrical Engineering.*
EDWIN WEEMS WINKLER, B.S. in E.E., *Instructor in Electrical Engineering.*
JOHN DARGAN WATSON, S.M., *Instructor in Civil Engineering.*
THOMAS PASTEUR NOE, JR., S.M., *Instructor in Civil Engineering.*
COLIN CARMICHAEL, B.Sc., *Instructor in Mechanical Engineering.*
CHARLES EDWARD FELTNER, B.S. in C.E., *Instructor in Engineering.*
ROBERT LEE GARRETT, A.M., *Instructor in Mathematics.*
HERMAN EVERETTE SPIVEY, A.M., *Instructor in English.*
JAMES ROBERT MARVIN, S.B. in E.E., *Teaching Fellow.*

REQUIREMENTS FOR ADMISSION

See page 42.

EXPENSES

See pages 44-47.

HISTORICAL SKETCH AND DESCRIPTION OF COURSES

Courses in engineering of professional grade have been given at the University of North Carolina since the opening of the institution in 1795. In fact the first student of the University, Hinton James, after a distinguished career as a student, engaged in the successful practice of the profesion. Prior to June, 1922, the courses in engineering were grouped in the School of Applied Science; but owing to a rapid development in engineering here, and due to the great need of well trained professional engineers, especially in the State of North Carolina, the Board of Trustees separated the Department of Engineering from the School of Applied Science and authorized the formation of a distinct school of engineering. In this school, at present, are included the Divisions of Civil, Electrical, and Mechanical Engineering; the school offers a curriculum in Chemical Engineering also.

The instruction offered in the School of Engineering consists of four-year curricula leading to the degrees of Bachelor of Science in Chemical, Civil, Electrical, and Mechanical Engineering. Aeronautical Engineering is given as an option in the Mechanical Engineering curriculum.

The degree of Master of Science in Engineering will be conferred on students who have satisfactorily completed approved graduate work extending over not less than one year. The course of studies leading to the Master's degree will be found in the catalogue of the Graduate School.

The importance of English in the curriculum has been emphasized and the courses are arranged so that students will receive instruction in English during each of the four years. Much attention is also given to training the young students in public speaking. This is an acquired art, and a very successful adjunct of an engineering education. Engineers must necessarily be versed in business affairs; and to meet this condition students will devote considerable time to economics and business administration and management. During the first three years, the contents of the curriculum are practically the same for all engineering students. Fundamentals in mathematics, mechanics, and other sciences are contained in these first three years while the applications of these fundamentals are illustrated throughout the course by the solution of practical problems in engineering.

The intimate contact of engineering students with the academic students and the participation of the former in all University activities is regarded as a valuable part of their general training.

COÖPERATIVE ENGINEERING EDUCATION

For the past twenty years or more a great amount of time and thought has been devoted to engineering by engineering teachers and the profession at large with the idea in mind of adopting some method in engineering education which would develop the observation and initiative of the students and bring them in touch with outside things during their theoretical training. Criticism has often been directed by practising engineers against young engineering graduates that they did not have any grasp or conception of practical things after four or five years of theoretical training.

Realizing that the coöperative system of training young engineers is a distinct step forward, the Engineering School at the University of North Carolina adopted this plan of education in September, 1922.

Under this plan the students of the junior class, except those studying Chemical Engineering, are divided into two groups designated as Sections I and II. The students in each group spend half their time at the University and the other half in actual engineering work. Each student has an alternate so that when a student of Section I is at school his alternate in Section II is on the job. At definite

intervals the student from Section II goes to school while his alternate in Section I takes his place on the job. This alternation continues throughout the junior year up to the latter part of September. Both sections attend the University full time during their senior year.

In order to compensate for the time that the students are away from school during the junior year, instruction is given to all engineering students for a period of twelve weeks in the summer following the sophomore year, and for twelve weeks in the summer following the junior year to coöperative Section II. Under this plan the students receive the same amount of school work as under the conventional four-year plan. The students receive pay for their services during the time that they are engaged in their outside work, thus enabling them partially to defray their expenses during their junior year.

Students in Chemical Engineering spend the junior year in residence. In lieu of coöperative work, they are expected to work for one summer in the plant of a chemical industry. The University will assist as far as possible in securing such summer positions.

Due to the existing economic situation which makes it impossible to secure an adequate number of coöperative positions of acceptable quality, the coöperative system is temporarily suspended. It will be resumed when justified by an improvement in general business conditions.

PROGRAMS OF UNDERGRADUATE STUDY

S.B. IN CHEMICAL ENGINEERING

FRESHMAN YEAR

Mathematics 1E, 2E, 3E; Chemistry 1, 2, 42; English 9abc; General Engineering 1abc, 6abc.

SOPHOMORE YEAR

Mathematics 24E, 25E, 26E; Chemistry 41; Physics 21E, 23E, 22E; English 29a; General Engineering 26abc, 36abc; Chemical Engineering 91.

JUNIOR SUMMER SESSION

Economics 31-32; Chemistry 61, 62.

JUNIOR YEAR

History 85; English 59; German 1, 2; Chemistry 81, 82, 91; General Engineering 56a; Chemical Engineering 94; Electrical Engineering 52abc; Mechanical Engineering 53abc.

SENIOR YEAR

English 60abc; Commerce 51E, 52E, 53E; Chemistry 43, 191, 192; Chemical Engineering 191, 194, 195, 196, 197. Electives, 10 quarter-hours, from the following courses:

General Engineering 116a; Civil Engineering 65a; Mechanical Engineering 48abc; Geology 11-12, 43-44; Chemistry 66, 92, 93, 121, 122, 123, 163, 164, 165, 183, 184, 185.

S.B. IN CIVIL ENGINEERING

FRESHMAN YEAR

Mathematics 1E, 2E, 3E; Chemistry 1, 2, 42; English 9abc; General Engineering 1abc, 6abc.

SOPHOMORE YEAR

Economics 31-32; Mathematics 24E, 25E, 26E; Physics 21E, 23E, 22E; English 29a; General Engineering 26abc, 36abc; Civil Engineering 20ab, 25a.

JUNIOR SUMMER SESSION

Civil Engineering 60a.

JUNIOR YEAR

Engish 59; History 85; General Engineering 56a; Civil Engineering 65a, 70a; Electrical Engineering 52abc; Mechanical Engineering 53abc.

SENIOR YEAR

English 60abc; Commerce 51E, 52E, 53E; Geology 77, 78; Civil Engineering 160abc, 165abc, 170abc, 175abc.

S.B. IN ELECTRICAL ENGINEERING

FRESHMAN YEAR

Mathematics 1E, 2E, 3E; Chemistry 1, 2, 42; English 9abc; General Engineering 1abc, 6abc.

SOPHOMORE YEAR

Economics 31-32; Mathematics 24E, 25E, 26E; Physics 21E, 23E, 22E; English 29a; General Engineering 26abc; Civil Engineering 30a; Electrical Engineering 22ab.

JUNIOR YEAR

History 85; English 59; General Engineering 56a; Civil Engineering 65a; Electrical Engineering 57a, 62abc; Mechanical Engineering 48a, 53abc, 68a.

SENIOR YEAR

English 60abc; Commerce 51E, 52E, 53E; Electrical Engineering 67a, 77a or 87a, 97abc, 102a, 112a, 122a, 162abc, 172abc.

S.B. IN MECHANICAL ENGINEERING

FRESHMAN YEAR

Mathematics 1E, 2E, 3E; Chemistry 1, 2, 42; English 9abc; General Engineering 1abc, 6abc.

SOPHOMORE YEAR

Economics 31-32; Mathematics 24E, 25E, 26E; Physics 21E, 23E, 22E; English 29a; General Engineering 26abc, 36abc; Civil Engineering 30a.

JUNIOR YEAR

History 85; English 59; General Engineering 56a; Civil Engineering 65a; Electrical Engineering 52abc; Mechanical Engineering 48a, 63abc, 66a, 68a.

SENIOR YEAR

English 60abc; Commerce 51E, 52E, 53E; Mechanical Engineering 78abc, 88abc; *Heat-power Option;* Mechanical Engineering 73a, 83a, 93a; *Aeronautical Option:* Mechanical Engineering 166a, 176a, 186a.

COURSES OF INSTRUCTION

Except by special permission and as noted below (Courses Civil Engineering 35a and 80a) courses in engineering are open to students in engineering only.

The courses offered in the School of Engineering are described below under the general headings under which they naturally fall—General Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering.

GENERAL ENGINEERING

Courses for Undergraduates

G.E. 1abc. MECHANICAL DRAWING AND DESCRIPTIVE GEOMETRY. Value, 12 quarter-hours.

Lettering and use of drawing instruments. Descriptive geometry, covering fundamental problems of the point, line, and plane and their application to problems of the intersection and development of surfaces. Problems in orthographic and isometric projections. *Two lecture and four laboratory hours a week, fall, winter, and spring quarters.* Professor Smith; Messrs. Feltner, Watson.

G.E. 6abc. ELEMENTARY MECHANICS. Corequisite, Mathematics 1-2-3E. Value, 6 quarter-hours.

The basic principles of statics and an elementary course in strength of materials, covering conditions of equilibrium, force, and funicular polygons, center of gravity, friction, beams, and jointed structures. This course correlates with first year mathematics and drawing. *Two hours a week, fall, winter, and spring quarters.* Professors Hickerson, Trimble, Smith; Messrs. Hollett, Watson, Noe.

G.E. 26abc. APPLIED MECHANICS. Prerequisite, Mathematics 1-2-3E, General Engineering 6abc. Value, 9 quarter-hours.

The fundamental conceptions of statics, kinematics, and kinetics; including resultants of force systems, equilibrium of force systems, friction, centroids, moments of inertia of areas and bodies, motion of a particle, motion of rigid bodies, force, mass and acceleration, work and energy, impulse and momentum. *Three hours a week, fall, winter, and spring quarters.* Professors Hickerson, Smith, Trimble; Mr. Noe.

G.E. 36abc. MATERIALS OF ENGINEERING. Value, 9 quarter-hours for civil and chemical, and 6 quarter-hours for mechanical engineering students.

Constitution, physical properties, and tests of the important materials, such as wood, cement, stone, iron, steel, etc., used in engineering construction; metallurgy of iron and steel and the more important alloys. Civil and chemical engineering students are required to take all lecture and laboratory work; mechanical engineering students are required to take lectures only. *Two lecture hours a week, fall quarter, two lecture and three laboratory hours a week, winter and spring quarters. Laboratory fee, $4.00 a quarter for winter and spring.* Professors Trimble, White; Mr. Hollett.

G.E. 56a. THE STRENGTH OF MATERIALS. Prerequisite, Mathematics 24E-25E-26E, General Engineering 26abc. Value for chemical engineering students 5 quarter-hours; for civil, electrical, and mechanical engineering students, 6½ quarter-hours.

Mathematical and mechanical analysis of the stresses and strains occuring in the materials of engineering structures and machines; including such topics as static central loads, thin-walled cylinders, riveted joints, resilience, stress and deformation due to torsional loads, stresses in beams, deflection of beams, combined axial and bending loads, columns, combined normal and shearing stresses, impact and energy loads. Parallel laboratory exercises comprise tests of brittle and ductile materials in direct and indirect stress, and of riveted and welded joints. Experimental determination of stresses and deflections in beams and columns, and the comparison of these results with calculated values. *Five lecture and three laboratory hours a week, fall or spring quarter. Laboratory fee, $5.00.* Chemical engineering students do not take laboratory work or pay laboratory fee. Professors Hickerson, Trimble; Mr. Noe.

Courses for Graduates and Advanced Undergraduates

G.E. 116a. CONTRACTS AND SPECIFICATIONS. Value, 3 quarter-hours.

A course covering the laws of contracts, a detailed study of methods of writing correct specifications, the matter of securing or submitting bids, and the subject of bid bonds. *Three hours a week, spring quarter.* Professor ———————.

Courses Primarily for Graduates

G.E. 256abc. ADVANCED STRENGTH OF MATERIALS. Prerequisite, General Engineering 56a. Value, 10 quarter-hours.

General theory of flexure, combined stresses, theory of thick-walled cylinders, flexure of plates and curved beams; and other theoretical and empirical matter on the general subject of strength of materials that is not treated exhaustively in the undergraduate curriculum of most engineering schools. *Three hours a week, fall and winter quarters; four hours a week, spring quarter.* Professor Smith.

CHEMICAL ENGINEERING

Courses for Undergraduates

Ch.E. 91. INTRODUCTORY CHEMICAL ENGINEERING. Value, 6 quarter-hours.

A survey course covering materials used in the construction of chemical equipment, search of literature, elementary calculations, etc. In the laboratory the students assist the seniors in carrying out studies of the unit operations. *Three lecture and six laboratory hours a week, spring quarter.* Professor White, Mr. Brenner.

Ch.E. 94. METALLURGY AND METALLOGRAPHY. Corequisite, Ch.E. 91. Value, 6 quarter-hours.

A study of microscopic structure of ferrous and non-ferrous alloys and the effects of composition, heat treatment, and mechanical work upon these structures and the physical properties of these ferrous alloys. A portion of the course is devoted to laboratory study. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $7.00.* Professor White.

Courses for Graduates and Advanced Undergraduates

Ch.E. 191. CHEMICAL ENGINEERING LABORATORY. Prerequisites, Ch.E. 194, 195; corequisite, Ch.E. 196. Value, 5 quarter-hours.

Efficiency studies on chemical equipment, plant erection studies, and unit process work in the laboratory. *Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Professor White; Mr. Brenner.

Ch.E. 194-195-196. PRINCIPLES OF CHEMICAL ENGINEERING. Prerequisites, Ch.E. 91, 94. Value, 9 quarter-hours.

A study of the unit operations of chemical engineering, covering fluid flow, filtration, evaporation, distillation, etc. *Three hours a week, fall, winter, and spring quarters.* Professor White.

Ch.E. 197. CHEMICAL ENGINEERING CALCULATIONS. Value, 5 quarter-hours.

A study of material and heat balances in industrial processes. *Five hours a week, fall quarter.* Professor White.

Courses Primarily for Graduates

Ch.E. 291-292-293. SEMINAR IN CHEMICAL ENGINEERING. Value, 9 quarter-hours.

A discussion and library course. Selected advanced topics in the field of chemical engineering will be studied. *Two lecture and two library hours a week, fall, winter, and spring quarters.* Professor White.

Ch.E. 391. RESEARCH IN CHEMICAL ENGINEERING. Value, 16½ quarter-hours.

Research towards an advanced degree, the subject of which must be approved by the professor in charge. *One lecture and nine laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Professor White.

CIVIL ENGINEERING

Courses for Undergraduates

C.E. 20ab. CIVIL ENGINEERING DRAWING. Prerequisite, General Engineering 1abc. For civil engineering students. Value, 7 quarter-hours.

Lettering and titling, map and blue print reading, topographic and traverse plotting, computing, and estimating. *Two lecture and three laboratory hours a week, winter and spring quarters.* Mr. Feltner.

C.E. 25a. FIELD EXERCISES IN SURVEYING. Prerequisite, Mathematics 1-2-3E. For civil engineering students. Value, 1½ quarter-hours.

Practice in the use of tape, level, transit, and minor equipment, supplemented by the solution of field problems. *Three laboratory hours a week, fall quarter. Laboratory fee, $4.00.* Mr. Hollett.

C.E. 30a. ELEMENTARY PLANE SURVEYING. Prerequisite, Mathematics 1-2-3E. Value, 2½ quarter-hours.

An elementary course in the use of surveying instruments and a general treatment of the field of plane surveying. For students in electrical and mechanical engineering. *One lecture and three laboratory hours a week, fall or spring quarter. Laboratory fee, $4.00.* Professor Trimble; Mr. Watson.

C.E. 35a. SURVEYING AND PLOTTING FOR NON-ENGINEERING STUDENTS. Prerequisite, Mathematics 1-2. Value, 6 quarter-hours=1 course.

Methods of using the compass, transit, tape, and level in making ordinary surveys for land boundaries, acreage, volumes, profiles, and the establishment of lines in their true position. It involves field measurements of distances and angles, the plotting and description of maps from such data, and the computation of areas, volumes, grade lines, true meridian, etc. *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, $6.00.* Mr. Noe.

C.E. 60a. SUMMER ENGINEERING CAMP. Prerequisite, Civil Engineering 25a or equivalent. Value, 16½ quarter-hours.

Instruction in plane and geodetic surveying is given during eight weeks of the summer following the sophomore year at the University's Engineering Summer Camp at Brevard, N. C. The course includes the following subjects: I. Chaining; differential, profile, and cross-section leveling; plane-table, transit, and stadia topographic surveys; solar and stellar observations for the determination of meridian, latitude, longtitude, and time; triangulation including base line measurement; measurement of stream discharge; hydrographic surveying. II. Simple, compound, reversed, spiral, and vertical curves; frogs and turnouts; reconnaissance surveys; preliminary surveys; paper location; final location; mass diagrams and earthwork computation; slope-taking; estimate of quantities and costs. III. Typographical drawing, mapping of tra-

verse and boundary surveys, area computation, and other work of a similar nature. *Five lecture and forty laboratory hours a week, eight weeks. Laboratory fee, $10.00.* Professor Trimble.

C.E. 65a. HYDRAULICS. Prerequisite, Mathematics 24E-25E-26E. Value, 5½ quarter-hours.

The principles of flow of water through orifices, weirs, tubes, nozzels, pipes, and open channels as applied to measurement of water in hydraulic engineering practice. The fundamental principles of impulse wheels, reaction turbines, and centrifugal pumps. *Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, $4.00.* Mr. Watson.

C.E. 70a. GRAPHIC STATICS. Prerequisite, General Engineering 26abc. Value, 2½ quarter-hours.

Graphic determination of stresses in framed structures. *One lecture and three laboratory hours a week, winter quarter.* Professor Smith.

C.E. 80a. THE PRINCIPLES AND PRACTICE OF SANITATION. For non-engineering students, especially those in the Public Health curriculum of the School of Public Administration. Credit: 1 course.

A general survey course, consisting of lectures, demonstrations, laboratory exercises and field visits, conducted jointly by members of the University faculty who are specialists in the various fields of sanitary science, and designed to meet the needs of students preparing to engage in public health activities. The following subjects will receive attention: (1) Historical and epidemiological background of sanitation, its direct and indirect effects on the pubic health; (2) Sanitary surveys; (3) Rural sanitation; (4) Water supply—protection of sources, collection, purification and distribution; (5) Sewerage—sewage collection, treatment, disposal, stream sanitation; (6) Laboratory analysis of water, sewage, and industrial wastes; (7) Insect and rodent control, malariaology; (8) Ventilation and air conditioning—the physical and chemical properties and physiological effects of pure and impure air; (9) Illumination; (10) Plumbing; (11) Housing, City Planning and Zoning; (12) Food Sanitation—production, preservation, and preparation; (13) Milk sanitation; (14) Shellfish sanitation; (15) Garbage and refuse collection and disposal; (16) Sanitation of schools, camps, and bathing places. *Three lecture and four laboratory hours a week, spring quarter.* Course will not be given for fewer than five students. Professors Edwards, Hoefer, Lear, McPherson, R. E. Coker, Trimble, and others.

Courses for Graduates and Advanced Undergraduates

C.E. 160abc. HIGHWAY AND RAILWAY ENGINEERING, CITY PLANNING. Prerequisite, Civil Engineering 60a, or equivalent experience. Value, 13½ quarter-hours.

The first quarter is concerned with the study of location, design, construction, and maintenance of the various types of highways; characteristics of road materials; highway administration, legislation, organization, and financing. The second quarter is devoted to the study of railroad location, roadbed construction, and maintenance; railroad valuation, terminals, electrification, operation, etc. The third quarter's work considers the growth of cities; historical and aesthetic development of prominent features of the modern city; and detailed study of urban, suburban, and regional elements such as street plans, subdivisions, recreational facilities, zoning, traffic census and control. Parallel laboratory and design exercises consist of identification and physical testing of highway and railway materials, study of reports and observations of

projects under construction and completed, and design of street systems, subdivisions, traffic census and control.

Three lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $4.00 a quarter. Professor Trimble.

C.E. 165abc. HYDRAULIC AND SANITARY ENGINEERING. Prerequisite, Civil Engineering 65a. Value, 13½ quarter-hours.

The epidemiological background, principles, and practice of sanitation and public health engineering; the theory and fundamentals of design, construction, and operation of water supply and sewerage systems, water purification, and sewage treatment plants, as applied to municipalities and rural communities. Attention is given to studies of rainfall, stream flow, and storage as applied to water supply, water power, and waste disposal. Parallel laboratory exercises comprise problems in the layout and design of simple water supply and sewerage systems and water and sewage treatment works. Training is given in the operation of such utilities and the routine laboratory technique employed in their control. *Three lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $4.00 a quarter.* Professor Edwards; Mr. Hollett.

C.E. 170abc. STEEL STRUCTURES. Prerequisite, General Engineering 56abc and Civil Engineering 70a. Value, 12 quarter-hours.

Theory of structures, including analytical determination of stresses occurring in engineering structures, such as roof and bridge trusses and buildings. Parallel design exercises comprise specific and complete problems in the design of girders, trusses, and buildings. *Two lecture and three laboratory hours a week, fall and winter quarters; two lecture and six laboratory hours a week, spring quarter.* Mr. Noe.

C.E. 175abc. REINFORCED CONCRETE STRUCTURES. Prerequisite, General Engineering 56abc. Value, 10½ quarter-hours.

Development of the mathematical principles involved in the design of plain and reinforced concrete beams, slabs, columns, foundations, retaining walls, dams, arches, and girders. Parallel laboratory exercises comprise specific and complete problems illustrating the use of these structural elements in the design of buildings, bridges, and other reinforced concrete structures. *Two lecture and three laboratory hours a week, fall, winter, and spring quarters.* Professor Hickerson.

Courses Primarily for Graduates

C.E. 260ab. REGIONAL AND CITY PLANNING. Prerequisite, Civil Engineering 160abc, 165abc, or equivalent. Value, 3 quarter-hours a quarter.

Following an historical resumé of the subject, there is presented by means of lectures and readings a detailed topical analysis of the broad principles governing modern practice. The legal aspects are first treated, followed by consideration of the effects of physical factors, such as topography, river or sea front, etc. Consideration of communication facilities includes street plan, traffic control, transportation and transit problems, and port and industrial development. Zoning, housing, recreation, public health, statistics, public safety, and methods of financing precede a final analysis of numerous city or regional plans in effect in different parts of the country. *Three hours a week, winter and spring quarters.* Professor Trimble, and other members of the graduate faculty.

C.E. 265abc. ADVANCED SANITARY ENGINEERING. Prerequisite, Civil Engineering 65a, Civil Engineering 165abc, or their equivalent. Value, 9 quarter-hours.

An advanced course in sanitary and public health engineering, including the design and operation of water supply and sewerage systems, water and sewage treatment plants, water rate studies, leakage surveys, financial management,

stream sanitation, industrial waste disposal, rural sanitation, garbage disposal, drainage, malaria control, etc. Occasional lectures are given by practising engineers and public works and public health officials. *Three hours a week, fall, winter, and spring quarters.* Professor Edwards.

C.E. 270abc. ADVANCED STEEL STRUCTURES. Prerequisite, Civil Engineering 170abc and Civil Engineering 175abc. Value, 10 quarter-hours.

Internal work; elastic properties; least work; continuous beams of variable moment of inertia; statically indeterminate structures; redundant members; deflections of trusses; temperature stresses; secondary stresses; trusses of all types including the simply supported and continuous; cantilever, suspension, draw and lift bridges; arches, fixed and hinged at one, two or three points; roofs; tall building frames. *Three hours a week, fall and spring quarters, and four hours a week, winter quarter.* Professor Hickerson.

C.E. 275abc. ADVANCED REINFORCED CONCRETE STRUCTURES. Prerequisite, Civil Engineering 170abc and Civil Engineering 175abc. Value, 10 quarter-hours.

Analysis of monolithic and statically indeterminate reinforced concrete structures of various types, including continuous slabs and beams, rigid frames, multiple-span culverts, building frames, gravity and arch dams, domes, skew bridges. Emphasis is placed on the solution of numerous practical problems. The content of the courses, C.E. 270abc and C.E. 275abc, is coordinated so as to avoid duplication. *Four hours a week, fall quarter; three hours a week, winter and spring quarters.* Professor Hickerson.

C.E. 280a. HYDROLOGY. Prerequisite, Civil Engineering 165abc or equivalent. Value, 3 quarter-hours. This course may be continued for additional credit.

A detailed study of meteorology, rainfall, stream flow, storage, and other factors influencing hydrological investigations. The application of modern statistical methods to such problems is particularly stressed. *Three hours a week, fall quarter. Laboratory fee, $2.00.* Professor Edwards.

C.E. 285ab. WATER POWER ENGINEERING. Prerequisite, Civil Engineering 280a or equivalent. Value, 6 quarter-hours.

The investigation and design of water power developments, including preliminary hydrological studies, investigation of dam foundations, dam design, characteristics and selection of turbines, etc. A complete report will be prepared, including estimated cost of development, market for power, relation to other power systems, and financing. This course may be followed by Electrical Engineering 262a, 272a, 282a. *Three hours a week, winter and spring quarters. Laboratory fee, $2.00 a quarter.* Mr. Watson.

C.E. 290abc. SANITARY CHEMISTRY AND BIOLOGY FOR ENGINEERING STUDENTS. Prerequisite, Chemistry 1-2, Civil Engineering 65abc, or equivalent. Value, 5 to 20 quarter-hours.

A course designed to give intensive training in the laboratory methods employed in sanitary engineering practice. The work includes microscopical examinations; physical, chemical, and bacteriological determinations on water, air, milk, sewage, and industrial wastes; the analysis of sand and gravel for filtration purposes; limnological studies of streams and reservoirs; stream pollution investigations; and the application of laboratory tests to the control of sanitary works. Class and laboratory exercises are supplemented by field work and plant inspections. *Four to twelve laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Edwards; Mr. Hollett.

C.E. 360abc. HIGHWAY ENGINEERING RESEARCH AND DESIGN. Prerequisite, Civil Engineering 160abc or equivalent. Value, 5 to 20 quarter-hours.

Laboratory research problems in highway materials; investigation of problems in the scientific design and construction of modern road types; problems involving the development of equipment for use in investigation or specification of methods and materials. *Four to twelve laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Trimble.

C.E. 365abc. RESEARCH IN HYDRAULIC AND SANITARY ENGINEERING. Prerequisite, Civil Engineering 165abc or equivalent. Value, 5 to 20 quarter-hours.

For graduate or special students desiring to conduct investigations in hydrology, hydraulics, water or sewage treatment, or stream pollution. *Four to twelve laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Edwards.

C.E. 370abc. RESEARCH IN STRUCTURAL ENGINEERING. Prerequisite, Civil Engineering 170abc, 175abc, or equivalent. Value, 5 to 20 quarter-hours a quarter.

A course for graduate students desiring to engage in an intensive analytical or experimental investigation of structural engineering problems. *Four to twelve laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professors Hickerson, Trimble.

ELECTRICAL ENGINEERING

Courses for Undergraduates

E.E. 22ab. PRINCIPLES OF ELECTRICAL ENGINEERING. Prerequisite, Mathematics 1-2-3E, Physics 21E. Value, 3 quarter-hours, winter quarter, 4½ quarter-hours, spring quarter.

A study of the fundamental theory of direct current electric and magnetic circuits. *Three lecture hours a week, winter quarter; three lecture and three laboratory hours a week, spring quarter. Laboratory fee, $4.00 spring quarter.* Professor Miller; Mr. Winkler.

E.E. 52abc. ELEMENTS OF ELECTRICAL ENGINEERING. Prerequisite, Mathematics 24-25-26E, Physics 21-22-23E. Value, 13½ quarter-hours.

A study of the fundamental theory and applications of direct and alternating current circuits and machinery. A course for non-electrical students. *Three lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Lear; Mr. Winkler.

E.E. 57a. PROBLEMS IN ELECTRICAL ENGINEERING. Prerequisite, E.E. 62a. Value, 2 quarter-hours.

A special course in problems of non-sinusoidal alternating currents and wave analysis. *Two hours a week, spring quarter.* Mr. Stainback.

E.E. 62abc. PRINCIPLES OF ELECTRICAL ENGINEERING. Prerequisite, E.E. 22b, Mathematics 24-25-26E. Value, 13½ quarter-hours.

A thorough study of direct circuit machinery and alternating current circuits. *Three lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professors Miller, Lear; Mr. Stainback.

E.E. 67a. APPLICATIONS OF ELECTRICAL MACHINERY. Prerequisite, E.E. 62abc. Value, 3 quarter-hours.

Electrical machinery, principally transformers, studied from the standpoint of problems encountered in applications. *Three hours a week, fall quarter.* Mr. Stainback.

E.E. 77a. ILLUMINATING ENGINEERING. Prerequisite, E.E. 62abc. Value, 3 quarter-hours.

A study of the physical, physiological, and psychological principles of light and illumination; comparison of light sources; photometry; design of illumination systems for various commercial purposes. *Three hours a week, winter quarter.* Professor Lear.

E.E. 87a. ELECTRIC RAILWAY ENGINEERING. Value, 3 quarter-hours.

Design of electric railway systems; train resistance; speed-time curves; power requirements; motor equipment and control; distribution systems; main-line electrification. *Three hours a week, spring quarter.* Mr. Stainback.

E.E. 97abc. ELECTRICAL MEASUREMENTS. Value, 7½ quarter-hours.

Theory, calibration, and use of instruments for the measurement of current, potential difference, power, and energy; bridge methods of measuring resistance, inductance, and capacitance; instrument transformers; magnetic measurements; dielectric tests; cable testing. *One lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $3.00 a quarter.* Mr. Stainback.

Courses for Graduates and Advanced Undergraduates

E.E. 102a. ELECTRICAL POWER TRANSMISSION. Prerequisite, Electrical Engineering 62abc, Mathematics 26E. Value, 3 quarter-hours.

Theory and problems involved in the transmission of electrical energy, incluing the hyperbolic function solution of long lines. *Three hours a week, fall quarter.* Professor Miller.

E.E. 112a. ELECTRIC CIRCUITS. Prerequisite, Electrical Engineering 102a. Value, 3 quarter-hours.

The solution of problems involving power circuit networks, multi-circuit transformers, general circuit constants, etc. *Three hours a week, winter quarter.* Professor Miller.

E.E. 122a. ELECTRICAL CIRCUITS. Prerequisite, Electrical Engineering 112a. Value, 3 quarter-hours.

A continuation of Electrical Engineering 112a, including transients, communication circuits, thermonic tubes, and gaseous conduction. *Three hours a week, spring quarter.* Professor Miller.

E.E. 162abc. PRINCIPLES OF ALTERNATING CURRENT MACHINERY. Prerequisite, Electrical Engineering 62abc, Mathematics 26E. Value, 18 quarter hours.

Theory and principles of the transformer, alternator, synchronous motor, synchronous converter, induction motor, and other alternating current motors. *Three lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $7.00 a quarter.* Professor Miller; Mr. Winkler.

E.E. 172abc. ELECTRICAL DESIGN. Prerequisite, Electrical Engineering 62abc. Value, 9 quarter-hours.

Electrical, mechanical, and economic questions involved in the design of electric machinery; the effect of the design constants on the proportions and operation of machines. Each student will be required to make complete calculations for a d. c. generator or motor, a transformer, and an alternator. *Six laboratory hours a week, fall, winter, and spring quarters.* Professor Lear.

Courses Primarily for Graduates

E.E. 262a. ELECTRIC TRANSIENTS. Value, 5 quarter-hours.

The mathematical theory of the phenomena of the transient state met with in the operation of electric circuits and machines. *Five lecture hours a week, one quarter.* Professor Miller.

E.E. 272ab. ADVANCED TRANSMISSION PROBLEMS. Value, 5 quarter-hours a quarter.

Problems pertaining to high voltage transmission of electrical power. *Five hours a week.* Professor Miller.

E.E. 282a. DESIGN OF TRANSMISSION SYSTEMS. Value, 3 quarter-hours.

Economic principles involved in the preliminary layout; insulation and lightning protection; sag of conductors; mechanical design of poles and towers. Professor Lear.

E.E. 382abc. RESEARCH AND DESIGN IN ELECTRICAL ENGINEERING. Value, 5 to 15 quarter-hours.

The solution of one or more definite problems in some particular field of electrical engineering. The work of this course will be outlined, as far as possible, to suit the needs of the individual student, and will consist of original investigations, designs, or economic study. *Four to ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Professor Miller.

MECHANICAL ENGINEERING

Courses for Undergraduates

M.E. 48a. MECHANISM. Prerequisite, General Engineering 1abc, Mathematics 1-2-3E. Required of mechanical and electrical engineering sophomores. Value, 6 quarter-hours.

The relative motions, velocites, and accelerations of machine parts, including a study of linkages, cams, gears, belts, gear trains, and other mechanisms. *Three lecture and six laboratory hours a week, winter quarter.* Mr. Carmichael.

M.E. 53abc. STEAM AND GAS MACHINERY. Prerequisite, Mathematics 24-25-26E, Physics 21-22-23E. Required of civil, electrical, and chemical engineering juniors. Value, 3 quarter-hours, fall quarter; 4½ quarter-hours, winter and spring quarters.

A course in the fundamentals of steam and gas heat-power machinery, designed especially for the needs of students in civil, electrical, and chemical engineering; includes a study of the principles governing the operation of steam engines, steam turbines, gas engines, boilers, and boiler auxiliaries. *Three lecture hours a week, fall quarter; three lecture and three laboratory hours a week, winter and spring quarters. Laboratory fee, $5.00 a quarter, winter and spring quarters.* Professor Hoefer; Mr. Carmichael.

M.E. 63abc. THERMODYNAMICS AND HEAT ENGINES. Prerequisite, Mathematics 24-25-26E, Physics 21-22-23E. Required of mechanical engineering juniors. Value, 13½ quarter-hours.

A study of the laws governing the transformation of heat into mechanical energy; properties of gases and vapors; gas and vapor cycles; power, efficiency, and performance of heat engines; study of steam engines, steam turbines, gas engines, compressed air, and refrigeration. *Three lecture and three laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $5.00 a quarter.* Professor Hoefer; Mr. Carmichael.

M.E. 66a. GENERAL AERONAUTICS. Prerequisite, Physics 21-22-23E or equivalent. Required of mechanical engineering juniors. Value, 3 quarter-hours.

A study of simple aerodynamics, airplane engines, aircraft instruments, navigation, and commercial aviation. Textbooks: *Simple Aerodynamics* by Montieth and Carter. *Three hours a week, fall quarter.* Professor Bailey.

M.E. 68a. ELEMENTARY MACHINE DESIGN. Prerequisite, General Engineering 26abc, 56a, Mechanical Engineering 48a, Mathematics 24-25-26E. Required of mechanical and electrical engineering juniors. Value, 6 quarter-hours.

The study and design of the elementary parts of machines, including riveted joints, screws, keys, shafts, gearing, belting, and power transmissions, using the principles of mechanics and accepted empirical methods as a basis. *Three lecture and six laboratory hours a week, spring quarter.* Professor Bailey; Mr. Carmichael.

M.E. 73a. STEAM ENGINES AND TURBINES. Prerequisite, Mechanical Engineering 63abc. Value, 4½ quarter-hours.

A continuation of thermodynamics and heat engines of the junior year, with further study in the field of steam engineering. It includes the laws governing the flow of fluids and applications to orifices and nozzels; advanced discussion of the thermodynamic process and cycles of vapors; a study of reheating and regenerative cycles as applied to steam turbine practice; a study of the simple and compound reciprocating steam engine. *Three lecture and three laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Professor Hoefer.

M.E. 78abc. INTERNAL COMBUSTION ENGINES. Prerequisite, Mechanical Engineering 63abc. Required of mechanical engineering seniors. Value, 12 quarter-hours.

A continuation of thermodynamics and heat engines of the junior year, with further study in the field of internal combustion engines. It includes a more advanced discussion of the thermodynamic processes of gases and of gas cycles, involving variable specific heats and "Real Mixture Standards"; fuels and their combustion, carburetors and methods of fuel injection; performance of internal combustion engines. *Three lecture hours a week, fall quarter; three lecture and three laboratory hours a week, winter and spring quarters. Laboratory fee, $5.00 a quarter for winter and spring.* Mr. Carmichael.

M.E. 83a. STEAM BOILERS AND ACCESSORIES. Prerequisite, Mechanical Engineering 73a. Value, 3 quarter-hours.

A study of fuels and combustion, boilers and boiler accessories, gas producers, feed-water heaters, economizers, and condensers. *Three lecture hours a week, winter quarter.* Professor Hoefer.

M.E. 88abc. MACHINE DESIGN. Prerequisite, Mechanical Engineering 68a. Required of mechanical engineering seniors. Value, 16½ quarter-hours.

A continuation of Mechanical Engineering 68a and the strength of materials given in General Engineering 56a. Stress analysis and design of basic machine parts, and the dynamics of machinery and engines. *Two lecture and six laboratory hours a week, fall and winter quarters; two lecture and nine laboratory hours a week, spring quarter.* Professor Bailey.

M.E. 93a. STEAM AND GAS ENGINEERING DESIGN. Prerequisite, Mechanical Engineering 83a. Value, 3 quarter-hours.

Calculations used in the determination of sizes and the more important details of power plant apparatus, such as steam engines and turbines, gas engines, air compressors, boilers, etc.; problems in heating and ventilation. *Three lecture hours a week, spring quarter.* Professor Hoefer.

Courses for Graduates and Advanced Undergraduates

M.E. 166a. AERODYNAMICS. Prerequisite, General Engineering 26abc, Civil Engineering 65a, Mechanical Engineering 66a. Value, 4½ quarter-hours.

This course covers fluid mechanics, similitude, functions and characteristics of air foils, theory and calculation of airplane performance, stability, control and maneuverability. Textbook: *Airplane Design* by Warner, *Applied Aerodynamics* by Barstow, and the reports of the National Advisory Committee for Aeronautics. *Three lecture and three laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Professor Bailey.

M.E. 176a. DESIGN OF AIRPLANES. Prerequisite, General Engineering 56a, Mechanical Engineering 166a. Value, 4½ quarter-hours.

This course includes the calculation of airplane loadings, materials of construction, stress analysis, Department of Commerce requirements, design methods, weight control, and structural tests. Textbook: *Airplane Stress Analysis* by Klemin, *Airplane Design* by Warner, and references in structural analysis texts and current periodicals. *Three lecture and three laboratory hours a week, winter quarter.* Professor Bailey.

M.E. 186a. AIRPLANE ENGINES. Prerequisite, Mechanical Engineering 166a; corequisite, Mechanical Engineering 78abc. Value, 4½ quarter-hours.

A study of airplane engines and propellers, design principles, performance calculations, and altitude effects; characteristics of existing engines, accessories, and engine testing and construction. Textbook: *The Airplane Engine* by Marks, and references in engine design textbooks, current literature, and manufacturers' specifications. *Three lecture and three laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Professor Bailey.

Courses Primarily for Graduates

M.E. 283abc. ADVANCED ENGINEERING THERMODYNAMICS. Prerequisite, Mechanical Engineering 78abc and 83a. Value, 5 quarter-hours a quarter.

An advanced course in thermodynamics with application to the theory and design of heat-power apparatus, such as steam engines and turbines, internal combustion engines, refrigerating machines, and heating and ventilating systems. *Five hours a week, fall, winter, and spring quarters.* Professor Hoefer.

M.E. 288abc. ADVANCED MECHANICAL DESIGN. Prerequisite, Mechanical Engineering 88abc. Value, 5 quarter-hours a quarter.

A mathematical and experimental study of the effects of motion and vibration on the design and performance of machines and structures. *Three lecture and four laboratory hours a week, fall, winter, and spring quarters.* Professor Bailey.

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George Howe, Ph.D.

GENERAL STATEMENT

Though courses of instruction in economics and in certain business subjects have been offered for many years in the University of North Carolina, not until 1919 was there established a regular business curriculum. In that year, the Legislature, in conformity with the recommendations of the President and the Board of Trustees, enacted the legislation which resulted in the immediate organization of the School of Commerce. The School occupies a place in the University organization which is coördinate in standing with the College of Liberal Arts and the School of Applied Science.

The undergraduate curriculum, leading to the degree of Bachelor of Science in Commerce, covers a period of four years and is designed to give a foundation of broad and general culture, and at the same time supply a definite training to those who intend to engage in any of the great lines of industrial and commercial activity. For those desiring more intensive specialization the School of Commerce offers graduate courses leading to the degree of Master of Science in Commerce.

AIM AND PURPOSE

The phenomenal industrial growth of the South in recent years has produced an imperative need for trained business men. The School of Commerce is the expression of the University's desire to serve this special need of its own particular section. To this end substantial support has been accorded the School by both the University and the State as a whole. In consequence the School has been provided

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.

with a large and able corps of instructors, with satisfactory quarters in Bingham Hall, and with thoroughly modern teaching facilities.

It is the purpose of the School of Commerce to provide its students with as thorough and scientific business training as it is possible to give within the range of the subjects which it attempts to cover. Its teaching policy assumes that such training should consist not only of the requisite understanding of the principles and methodology which govern the organization and administration of typical business enterprises, but in addition an understanding of the problems and the larger relationships of the economic organization as a whole. In his attempt to master the technical and the vocational aspects of business, the student will not be permitted to lose sight of the social and cultural.

TEACHING POLICY

Wherever possible, the plan is followed of presenting the subject-matter of the various courses from the point of view of the executive, always bearing in mind that the executive's field of interest includes the broad outside relationship as well as the internal administration of his business. Adherence to this common point of view prevents confusion in the mind of the student, and enables him to place the problems and practices of business in their true perspective.

Within the short space of time at his disposal, it is impossible for the student to investigate in detail the entire field of business. It is therefore the policy of the School of Commerce to supplement the general survey which is required of every student with a more intensive study of that portion of the field which is of especial interest to him. To this end there have been prepared for the student certain groupings of closely related courses. The groupings have been made in such a way as to correspond to certain major functions which must be performed in the successful administration of a business enterprise.

These functions may be designated as follows: (1) The administration of production; (2) the management of finance; (3) marketing and selling; (4) management of personnel; (5) the avoidance or distribution of risk; (6) dealing with problems of transportation; (7) conforming with legal requirements; (8) handling the problem of accounting.

In addition to these groups, which have been constructed to conform with the major business functions, certain others have also been provided. The first of these offers special study in the field of foreign trade. It is so devised as to be of value not only to those intending to engage in some branch of export or import trade, but also to be of material aid to those looking forward to careers in connection with the consular service.

SCOPE OF SPECIALIZATION

Specialization in the manner here indicated, however, does not begin until the senior year, except in the accounting and marketing groups. The School of Commerce accepts the principle that a broad and thorough training in fundamentals, as well as some maturity of mind, should precede any high degree of specialization. Whether the educational process be viewed as a training of the mental faculties, or as the acquisition of a fund of knowledge, it is equally imperative that the materials of study be definite and compact. Arrangement and treatment must be so designed as to assure results which are cumulative and which have continuity of direction.

To this end the undergraduate curriculum of the School of Commerce is arranged in logical sequence, with the same requirements imposed upon virtually all candidates for degrees until the senior year is reached. During his freshman and sophomore years the student is required to follow a path of study which closely parallels the liberal arts course. The first year's work includes English composition, mathematics, history, economic geography, and a modern language. In the second year are courses in general economics, industrial history, English and American literature, a natural science, and a continuance of the chosen modern language.

In his junior year the student devotes most of his time to required courses in economics, commerce, psychology, and government, which include money and banking, business organization, accounting, economic statistics, general psychology, and American federal government.

In the senior year specialization begins through the election by the student of his preferred group of courses from the list outlined above. It is to be noted that the freedom to elect does not apply to courses regarded singly, but only to courses as they are arranged in more or less standardized groups. Having chosen a given group, the student is expected to satisfy its requirements in full unless a substitute program has been submitted to and approved by the Administrative Board of the School.

In all of the groups two courses in business law are required, and one course on the relationship between government and business. A fourth requirement common to all groups is a choice either of the course in Theories of Economic Reform, or of the course in the Labor Problem. This leaves in each group from five to six courses which constitute the subject matter of specialization.

IMPORTANCE OF GRADUATE STUDY

From the preceding survey of the undergraduate curriculum, it is apparent that those students who are desirous of securing the benefits of thorough specialized training and intensive research work, should continue in the University for at least one year of graduate study.

The Administrative Board of the School strongly urges the advisability of such an additional year for the superior student. Equipped with his undergraduate training, unburdened of the formal routine of courses which have been preparatory in nature, the graduate student is free to concentrate his full powers upon the subject of his choice. His attitude changes from one of receptivity and acquiescence to one of active inquiry and initiative. He is charged with the responsibility of finding new materials, new arrays of facts, and of subjecting them to his own independent analysis, to the end that new relationships may be discovered or new evaluations made. His initiative, his analytical and creative powers, his quality of persistence, are tested and developed to a degree impossible of attainment in the undergraduate years.

The School of Commerce is prepared to offer graduate instruction and facilities for graduate research activities in the fields indicated by the senior study groups. Courses have been developed exclusively for graduate students. They are designed primarily for the encouragement and guidance of research activity, and in consequence are conducted informally and on a basis of close personal contact between professor and student.

GRADUATE DEGREES

The School of Commerce offers through the Graduate School the graduate degree of Master of Science in Commerce. Candidacy for this degree is conditioned upon the holding of an S.B. in Commerce degree from this institution or from another institution of approved standing where the work required in commerce is of substantially the same nature and volume. Graduates of other institutions who hold the A.B. degree are advised to register as candidates for the Master of Arts degree, majoring in Economics. In this way a limited number of commerce courses may be secured for graduate credit; or, if the student desires, by prolonging the period of residence the undergraduate deficiencies may be removed, leaving the path clear for the degree of Master of Science in Commerce.

The Department of Economics offers through the Graduate School the degree of Doctor of Philosophy. In conjunction with the Departments of History, Sociology, and Rural Social Economics, it also offers the degree of Doctor of Philosophy in Social Science. (For the general rules and regulations governing the candidates for these degrees see catalogue of the Graduate School.)

Graduates of other institutions desiring to enter the School of Commerce as candidates for higher degrees should submit their records together with application for entrance to the Dean of the Graduate School.

The conferring of the degree of Master of Science in Commerce assumes as a minimum the completion of nine full courses or their equivalent as approved by the Dean, a residence period of at least

one year, and the completion of a thesis which embodies the results of original research work on the part of the student. (For further details see the catalogue of the Graduate School.)

SPECIAL STUDENTS

There are many young people already in business who feel the need of additional special training but who are unable to spend the full four years at the University, or who cannot provide proper entrance credits. Recognizing this the School of Commerce will admit students of twenty-one years of age or over, who cannot fulfill the entrance requirements, as special students, but not as candidates for degrees. Such students must supply satisfactory evidence of their ability to profit from the courses and *will be admitted only on probation.* A personal interview with the Dean is recommended in connection with the application for admission.

LIBRARY FACILITIES

In addition to the facilities afforded by the General Library of the University, the School of Commerce is equipped with its own special library. In the latter are contained a large number of economic and business publications of recent years which may be of value to the student. An appropriation of $2,000 annually assures that the collection will be well-maintained and kept up-to-date.

Especially noteworthy is the collection of periodical publications. Most of the important periodicals in the general field of business and finance are regularly received. In addition, the School of Commerce is a regular subscriber to over fifty trade journals, and to the statistical services of Brookmire, Gibson, the Babson Institute, and the Standard Statistics Company. The Harvard and Cambridge Economic Surveys are also provided.

A full time librarian is in charge and is prepared to aid students in the collection of such materials for research work as may not be currently available in the University. Special library privileges are accorded graduate students who have access to the stack rooms and private desk space.

LECTURES AND OBSERVATION TRIPS

Students are expected to take advantage of the frequent opportunities to hear lectures offered by prominent business men who are invited to the University for this purpose. These lectures will prove of great value to the student in furthering his acquaintance with the practical aspects of business.

From time to time the classes in business subjects make visits to neighboring factories and other types of business institutions for the purpose of making first-hand studies of organizations and administrative methods.

STENOGRAPHY

No credit toward the degree is given for stenography but every student is urged to acquire facility in the use of it before graduation. Instruction in this subject is not offered by the University but can be secured in Chapel Hill in a private school.

SOCIETIES

The Taylor Society maintains a chapter in connection with the School of Commerce and the School of Engineering which is open to both faculty and students. Bi-weekly meetings are held at which nationally known authorities present papers.

Two national commerce fraternities have chapters in the University: Alpha Kappa Psi and Delta Sigma Pi. These fraternities are professional in character and perform valuable services in the preparation of students for a business career. Membership includes both students and faculty.

STANDARDS OF WORK

The School has been admitted to membership in the American Association of Collegiate Schools of Business. This is an organization formed for the promotion of thorough-going, scientific training for the business profession. It maintains high standards of membership based on the number and training of the faculty, the thoroughness of the work, the length and breadth of the curriculum, the number of students, the financial backing of the school, and the facilities for carrying on the work.

STUDENT HABITS

Training for business, if it is to be worthy of the name, should include at least two elements: first, an understanding of the principles and processes of business; and second, the practice of habits of work essential to business success. Observation appears to justify the conclusion that promptness, industry, systematic application, and honest performance are quite as vital to mastery in the business world as an understanding of the nature of industrial and commercial phenomena. It is wasteful, then, to allow students to proceed far in this field if they are unwilling to fashion their habits in conformity with these essential requirements. The policy of the School will be to drop from its rolls any student who fails to respond to the above standards.

REQUIREMENTS FOR ADMISSION

See page 42.

EXPENSES

See pages 44-47.

CURRICULA LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN COMMERCE

The degree of Bachelor of Science in Commerce will be conferred upon students who satisfy the entrance requirements and complete the four-year curriculum as outlined below, consisting of not less than thirty-seven courses.

In case required freshman courses are taken after the student begins his seventh quarter or required sophomore courses are taken after he begins his tenth quarter, half credit only is allowed.

The work in the freshman and sophomore years is the same in all the courses of study, unless otherwise indicated, and is as follows:

Freshman Year

English 1-2-3
Mathematics 1-2
History 1-2-3
Economics 9
Economics 11
French 3-4, or
Spanish 3-4, or
German 3-4

Sophomore Year

English 21-22
Economics 31-32
Economics 35
French 21, 25, or
Spanish 21, 25, or
German 21, 22
Zoölogy 41-42 or
Botany 41-43, or
Chemistry 1-2, or
Physics 21-22, or
Geology 11-12

In order that the junior and senior subjects may be chosen in such a way as to constitute a coherent and comprehensive whole, rather than an unrelated and scattered series, the following programs have been devised. Each student is expected to elect at the beginning of his junior year the group which best serves his needs and to adhere to it. However, students whose interests do not coincide with any of the following groups are invited to submit an alternative program for the approval of the Administrative Board of the School.

I. FACTORY ORGANIZATION AND ADMINISTRATION

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

Senior Year

Commerce 91-92, 151, 155, 173, 191; Economics 131, 191 (or 195), 197; select one course from the following: Government 22, 131, 132, Economics 141, *English elective, Philosophy 41, 56, 57, 61, Rural Economics 134.

II. BANKING AND FINANCE

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

* The elective in English must be approved by the Dean.

Senior Year

Commerce 91-92, 191, 195; Economics 131, 185, 191 (or 195), 197; Commerce 181 (or Economics 182); select one from the following: Economics 141, *English elective, Government 22, 131, 132, Philosophy 41, 56, 57, 61, Rural Economics 134.

III. MARKETING, MERCHANDISING, ADVERTISING

Junior Year

Commerce 51, 71-72; Economics 71, 81-82, 124; Psychology 21-22.

Senior Year

Select three from Commerce 61, 161, 163, 165; Commerce 91-92; Economics 131, 191 (or 195), 197; Government 21; select one course from Economics 141, *English elective, Government 22, 131, 132, Philosophy 41, 56, 57, 61, Rural Economics 134.

IV. PERSONNEL MANAGEMENT

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

Senior Year

Commerce 91-92, 151, 155; Economics 131, 191, 195, 197; Psychology 135 or Sociology 41; select one from Economics 141, *English elective, Government 22, 131, 132, Philosophy 41, 56, 57, 61, Rural Economics 134.

V. RISK-BEARING AND INSURANCE

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

Senior Year

Commerce 91-92, 61 (or 191), 121, 122; Economics 121, 131, 191 (or 195), 197; select one from Economics 141, *English elective, Government 22, 131, 132, Philosophy 41, 56, 57, 61, Rural Economics 134.

VI. BUSINESS LAW

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

Senior Year

Commerce 191, 195; Economics 131, 141, 195, 197; Government 131; select three courses offered by the Department of Economics and Commerce.

VII. ACCOUNTANCY

Junior Year

Commerce 51, 71-72, 171; Economics 71, 81-82; Psychology 21-22.

Senior Year

Commerce 91-92, 173, 175, 191; Economics 131, 191 (or 195), 197; Government 21, 131 (or 132).

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* The elective in English must be approved by the Dean.

VIII. FOREIGN TRADE AND THE CONSULAR SERVICE

NOTE: It should be understood that this program merely lays the foundation for more advanced and specialized study prerequisite to the proper preparation of candidates for the consular service. One general course in Foreign Trade Technique cannot be expected to eliminate an apprenticeship in that field, but it should materially shorten it.

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Psychology 21-22.

Senior Year

Commerce 91-92, 145, 169, 181; Economics 124, 131, 161, 191 (or 195), 197; Government 22.

IX. GENERAL COURSE

Junior Year

Commerce 51, 71-72; Economics 71, 81-82; Government 21; Phychology 21-22.

Senior Year

Commerce 91-92; Economics 131, 185, (or 121), 191 (or 195), 197; select one from the following: Economics 141, *English elective, Government 22, 131, 132, Philosophy 41, 56, 57, 61, Rural Economics 134; select three courses offered by the Department of Economics and Commerce.

XIII. COMBINED COURSE IN COMMERCE AND LAW

For the details of this course please see under the School of Law, Part Five.

* The elective in English must be approved by the Dean.

THE SCHOOL OF PUBLIC ADMINISTRATION

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Walter Clinton Jackson, B.S., LL.D., *Dean.*

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Walter Clinton Jackson, B.S., LL.D., *Professor of Public Administration.*
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Harold Diedrich Meyer, A.M., *Professor of Sociology.*
English Bagby, Ph.D., *Professor of Psychology.*
†Herman Glenn Baity, Sc. D., *Professor of Sanitary and Municipal Engineering.*

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.
† Absent on leave, 1933-1934.
‡ Absent on leave, fall quarter, 1933.

Richard Junius Mendenhall Hobbs, A.B., LL.B., *Professor of Business Law.*

Samuel Huntington Hobbs, Jr., Ph.D., *Professor of Rural Social Economics.*

Daniel Allen MacPherson, Ph.D., *Professor of Bacteriology.*

Gustav Theodor Schwenning, Ph.D., *Professor of Business Administration.*

Thomas Jackson Woofter, Jr., Ph.D., *Research Professor of Sociology and Statistics.*

*Clarence Heer, Ph.D., *Research Professor of Economics.*

Wiley Britton Sanders, Ph.D., *Associate Professor of Sociology.*

Charles Dale Beers, Ph.D., *Associate Professor of Zöology.*

Harry DeMerle Wolf, Ph.D., *Associate Professor of Economics.*

Ralph McCoy Trimble, C.E., S.M., *Associate Profesor of Civil Engineering.*

Keener Chapman Frazer, A.M., *Associate Professor of Government.*

Frank Williams Hanft, S.J.D., *Associate Professor of Law.*

Paul Woodford Wager, Ph.D., *Associate Professor of Rural Social Economics.*

Wirth Fitch Ferger, Ph.D., *Associate Professor of Economics.*

Roy Melton Brown, Ph.D., *Associate Professor of Public Administration.*

Katharine Jocher, Ph.D., *Research Associate in the Institute for Research in Social Science.*

Rupert Bayless Vance, Ph.D., *Research Associate in the Institute for Research in Social Science.*

Harriett Herring, A.M., *Research Associate in the Institute for Research in Social Science.*

Lee Marshall Brooks, Ph.D., *Assistant Professor of Sociology.*

Robert Howard Sherrill, M.A., C.P.A., *Assistant Professor of Accounting.*

Charles Christopher Crittenden, Ph.D., *Assistant Professor of History.*

William Sumner Jenkins, LL.B., Ph.D., *Assistant Professor of Government.*

Raymond Wilson Adams, Ph.D., *Assistant Professor of English.*

Arthur Russell Hollett, S.B. in C.E., *Instructor in Engineering.*

James Harmon Chadbourn, A.B., J.D., *Assistant Professor of Law.*

George Harold Lawrence, A.M., *Supervisor of Field Work in Public Welfare and Social Work.*

GENERAL INFORMATION

The School of Public Administration has been established with three major objectives in view. One is to take its place alongside other efforts of the University of North Carolina to make higher education effective and dynamic in coming to grips with modern realities and

* Absent on leave 1933-1934.

with growing complex economic and social situations with which the citizen and educator are faced. The second purpose is to offer professional training to men and women in the art and science of government and public service, thus assuring practical applications to problems of government based upon adequate knowledge and sound theory. A third purpose is found in its efforts for study and research, to the end that it may provide adequate knowledge and facts for the upraising of standards and for those who need them in the performance of their administrative duties. Its curriculum seeks to contribute something to the reorganization and revivifying of higher and professional education in the state and the region, at the same time that it affords technical training for specialists preparing for public service and for those officials and workers who are already in the field.

The School of Public Administration is an extension and enlargement of the School of Public Welfare, which was established at the University of North Carolina in 1920, the main objective of which was the training of public welfare officials and social workers. Ten years of work of this School have shown clearly that there is not only a still larger need today for the sort of training which the School of Public Welfare has offered, but an insistent and growing demand for training in the larger fields of government and public administration as these are being called upon for greater service and more technical equipment to cope with modern situations. Consequently, in 1931, President Graham, upon the recommendation of Dr. Howard W. Odum, Director of the School of Public Welfare, urged the establishment of a new School of Public Administration in which the work in Public Welfare and Social Work would be continued with still higher standards as an important division. Such a school received the hearty support of the Governor of the State, who was successful in securing a beginning appropriation in line with his other efforts toward the reorganization and strengthening of government in North Carolina. Subsequently, a small coöperative grant for three years was received from the Rockefeller Foundation for coördinating the research needs of the School of Public Administration with the research program of the Institute for Research in Social Science. The new School was, therefore, authorized by the Board of Trustees at their meeting in June, 1932.

THE DEMAND FOR PROFESSIONAL TRAINING

The character of government and public relations has changed extensively in recent years to meet the increasing needs and demands of society. With every expansion of the function of government, there has arisen an agency to administer it, thus multiplying administrative processes and administrative officers. In national, state, and local area new officers, new departments, new bureaus, boards, and commissions have been created. There are now literally hundreds of

thousands of persons engaged in the work of public administration in this country. There is a widespread and insistent demand for efficiency and economy in government. There is an increasing demand that those who administer public affairs should have definite and specific training for their tasks. It is in response to these demands that this School has been created.

Opportunities for trained men in the public service are rapidly increasing. This is especially true in the fields of city management, health administration, public welfare, and social work, and is increasingly true in other fields such as financial administration, county management, and legal administration. Bureaus of research and various civic organizations also demand a large number of men and women who have had experience in research. There is also increasing opportunity for well-prepared teachers in this field, both for the secondary schools and for the colleges.

In addition to training for a specific task, the prevailing attitude toward political life is making it more inviting for people of broad training and outlook definitely to look toward a career in political life.

PURPOSES

The main purposes of the School may be stated as follows:

1. To give a general view of the field of public administration to those who may or may not wish to become public administrators, but who, if they do not become administrators themselves, will be able as citizens in every capacity to help raise the level of governmental efficiency.

2. To give special training to those who will enter the public service.

3. To give additional training to those already in the public service.

The curricula outlined in the following pages are planned to meet the requirements here stated.

ADMISSION

Students are admitted to the School of Public Administration at the beginning of the junior year. The requirements are:

1. The completion of the freshman and sophomore years in the College of Liberal Arts, or the School of Commerce, or equivalent work.

2. Of the following five subjects at least two (or equivalent courses) must be presented:

31-32	Economics	41	Sociology
21	Government	21-22	Psychology
47-48	History		

Four of the five preceding subjects will be required for graduation in this course. Students preparing to enter the field of social work may, with the approval of the Dean, substitute certain courses in sociology and rural sociology for the courses in government and history.

Special students, well qualified by experience, training, and ability, may be admitted by permission of the Dean to courses leading to a Certificate in Public Administration, or to a Certificate in Social Work.

For admission to the Graduate School, see page 42 and also the special catalogue of the Graduate School.

EXPENSES

See pages 44-47.

DEGREES AND CERTIFICATES

The degree of Bachelor of Science in Public Administration will be given for the course outlined below.

A Certificate in Public Administration or in Social Work will be given upon the completion of nine courses in the School of Public Administration approved by the Dean, together with the completion of three months of field work.

For information on graduate programs and advanced degrees in public administration the reader is referred to the Catalogue of the Graduate School.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC ADMINISTRATION

The object of this course of study is to give the student a broad view of the field of administration, to afford the basis for further training in specific administrative positions, and also to lead toward the preparation for teaching in the field of government and civics.

The work of the Freshman and Sophomore years will be, as stated above, the same as that for A.B. or S.B. in Commerce, or equivalent work, with the prerequisites as previously stated.

The major will be in the Department of Public Administration.

The minor should be in Economics, History and Government, Sociology, or Rural Social Economics.

The following courses, in the Junior and Senior years, are required:

101 Public Administration
131 American State Government
132 American Municipal Government, or
134 County Government Administration
141 Public Finance
151 Elements of Political Science
71-72 Accounting

Students preparing to enter the field of social work, on the approval of the Dean, may substitute for 141, 151, and (or) 71-72:

160 Introduction to Social Work
164 Family Case Work
168 The Community
193 Social Pathology

Electives: All courses listed in the Department of Public Administration and courses in the department of the minor subject. A limited number of free electives and substitutions of equivalent courses will be allowed with the permission of the Dean.

GRADUATE DIVISION

To meet the demand for trained men and women in the field of public service and social work, technical courses leading to preparation for particular positions in administrative work are offered. This work is on the graduate level and will lead to the degree of Master of Science in Public Administration. *See note above under Degrees and Certificates.* When and if the programs and degrees have been approved, such degrees will be administered by the Graduate School as are all other graduate degrees. The reader is referred to the catalogue of the Graduate School for full information covering all necessary matters of detail. The requirements for admission to these courses will be the same as those prescribed in the Graduate School. Properly qualified special students may be admitted to graduate courses with the approval of the Dean of the Graduate School and the Dean of the School of Public Administration.

The various fields of work are designated according to function, and courses especially adapted for the preparation of the student in each kind of work will be offered. The work is divided into four parts:

I. Public Service
II. Public Welfare and Social Work
III. Public Health Administration
IV. Research and Surveys

I. PUBLIC SERVICE

Public Service Administration is arranged in the following groups:

Group 1.—*City Management.* The object of the work in Group 1 will be to give the student specific training in city management and administration. A degree in Engineering is desirable but is not required. Among the courses that will naturally be taken are: those in public administration, municipal government and administration, city planning, public utilities, public finance, police, fire and traffic administration, etc. The course of study will be planned in conference with the Dean and will be based upon the previous preparation of the student and upon his aptitude for this work.

Group 2.—*Public Works Administration* is very closely allied to Group 1. A large proportion of present city managers are engineers. The prerequisite for the work in this group is the degree in engineering. The engineer who aspires to public works administration should have, in addition to his engineering training, courses in financial administration, municipal government and administration, personnel management, public health, public welfare administration, etc.

Group 3.—*County Management,* while presenting many of the same problems as city management, does have different problems such as regional planning, rural social problems, rural education administration, county government and administration, etc.

Group 4.—*Financial Administration* includes such problems as public finance, accounting, statistics, financial organization and administration, etc. The number and importance of administrative positions in this field are apparent. Expert training is definitely required for the proper administration of these phases of governmental work.

Group 5.—*Legal Administration* includes such positions as juvenile court judges, city and county attorneys, judges of city and county courts, and mayors. These officers will need in addition to their legal training courses in sociology, public welfare, psychology, economics, and courses listed above in groups 1, 3, and 4.

Group 6.—*Public Education Administration.* The problems of administration in the office of city and county superintendent and in state departments of education are increasingly exacting and difficult. In addition to their equipment and experience in the art of teaching and the general field of education, such officers need to know budget making, the principles of organization and the problems of administration, such as personnel, morale, classification, promotion and retirement systems, etc.; something of governmental accounting, state and municipal or county government; the relation of the schools to juvenile delinquency, public health, public welfare, and administrative law. It is therefore the purpose of the School of Public Administration to supplement and strengthen, where possible, the work of the Department of Education, by providing special training for higher administrative positions for those who have distinctive qualifications for administrative work.

II. PUBLIC WELFARE AND SOCIAL WORK

The former School of Public Welfare becomes a part of the School of Public Administration. Under the enlarged program, there will be no lessening of the emphasis upon training for social work. With continued special attention to training for work in rural and small town communities, the School in this division changes its objectives only in offering additional facilities for training in the administrative aspects of the social work field. It offers training and services fitted to the needs of several groups:

(1) To graduate students it offers two general groups of courses:

a. *Social Work.* The object of the work in this group will be to fit the student for work in either public or private social work agencies. Special emphasis will be given to case work.

b. *Public Welfare Administration.* In this group, without neglecting social work technique, emphasis will be upon the administrative aspects of social work. Public Welfare Administration will be stressed, but attention will also be given to the administration of private social agencies.

(2) To graduate students who do not care to work for an advanced degree, and to a limited number of other mature students whose educational background is approved by the Dean of the School, it offers a short course leading to a Certificate in Social Work. The following courses must be completed for the Certificates: Introduction to Social Work, Family Case Work, Advanced Family Case Work, Public Welfare Administration, The Family, and four elective courses. In addition, the student must have had three months of field work, either under the direct supervision of the School or in an agency approved by the School.

(3) For county superintendents of public welfare, juvenile court judges, probation officers, parole officers, workers in correctional institutions and in child-caring institutions, and other social workers desiring to do special work or research for a short time, special courses of study of one, two, or more quarters are arranged. Students not eligible for admission to other courses on account of lack of educational qualifications may on the approval of the Dean be admitted to these special courses as *special students.*

(4) Social workers desiring additional training for their work, and teachers and others wishing to gain some knowledge of certain phases of social work training, may find courses offered in connection with the Summer School suited to their purposes. The work of the summer quarter may also be counted toward a certificate or a degree.

(5) *Summer institutes for special groups:

a. In coöperation with the State Board of Charities and Public Welfare of North Carolina, institutes of one or two weeks' duration are held each summer for county superintendents of public welfare, juvenile court judges, probation officers, institutional workers, other social workers, and persons interested in social work. These institutes serve a two-fold purpose: first, they offer some additional training to the inadequately trained worker already holding a position; second, they furnish an opportunity for "stock-taking" and conferences to the social workers of the State.

* The institutes are not a part of the proposed graduate programs. Descriptions are inserted here to show the full picture of the School's connection with public welfare and social work.

b. In coöperation with the University Extension Division and the State Congress of Parents and Teachers, an annual Parent Teacher Institute is held during the summer session. This is a leadership training institute. The time duration is generally a week or ten days. National and state certificates are granted to those successfully completing the work. The method of conducting these institutes includes classroom work, lectures, reading, and entertainment.

c. The "Boy Scouts of America" requires of its executives professional advancement work. The Boy Scout executives of North Carolina come to the University twice each scholastic year for seminar study. Fifty hours of work are completed. The classroom and lecture work is done by members of the University faculty, in coöperation with the Boy Scouts of America and under the leadership of the Bureau of Recreation. The University also sponsors frequent Boy Scout gatherings.

(6) Bureau of Recreation. Information and advisory service regarding play, recreation, leisure time problems, and physical education are offered through the Bureau of Recreation of the University Extension Division in coöperation with the Department of Sociology. Play institutes are conducted to demonstrate the value of organized recreation in school and community. Physical ability tests for school children are available. The Bureau is officially represented on a number of National and State Boards. Lectures to civic and club groups are offered.

Field Work. It is the purpose of the school to give emphasis to training for social work in rural and small town communities—that is, for the typical social work situation as it exists in North Carolina and the South. Field work is under the direction of a trained social worker of successful practical experience. The supervisor of Field Work is also the officially designated Superintendent of Public Welfore for Orange County, in which the University is located. In addition, he has charge of the work of executive secretary for the local Red Cross Chapter and is designated service officer for the local post of the American Legion. This concentration of local social work under one head gives the School a variety of cases and enables it to give field work to its limited number of case work students under the immediate direction of a member of its own staff.

In addition, the School has had from its organization cordial relationships with the State Board of Charities and Public Welfare and the coöperation of that Board in arranging field work for its students.

The field work is closely correlated with class instruction in case work methods. The class in advanced case work meets twice a week for a two hour period. One of the periods is devoted to the discussion of

theoretical case work technique under the direction of the instructor in case work. The other period is devoted to the discussion of cases with which the students are actually dealing in their field work. At this meeting both the instructor and the supervisor of field work are present. In cases involving mental problems, they are joined by the instructor in abnormal psychology, who is also head of the Bureau of Mental Health and Hygiene of the State Board of Charities and Public Welfare. In short, the group becomes a case committee under the direction of the instructor and the active leadership of the supervisor of case work.

The course of study in each group will be arranged with the approval of the Dean after full consideration of the preparation, special qualifications, and abilities of the student.

III. PUBLIC HEALTH ADMINISTRATION

Public Health is an increasingly important function of government. State Boards of Health cover a wide field of service and each city and county has its public health administrator. The number of public health officials is therefore increasing and the demands are insistent for higher standards of qualification and equipment for health administrators.

The University of North Carolina is not proposing to set up a School of Public Health but it is offering courses of study to supplement the basic work in this field, in order that immediate and practical needs in this state and region may be adequately met. The State Board of Health is coöperating fully and completely in carrying out this program. In the University, the School of Medicine, the School of Engineering and the Graduate School are joining with the School of Public Administration in offering the necessary courses. The work will be divided as follows:

I. Short Course in Public Health Administration.

II. Courses leading to a Certificate in Public Health Administration.

III. Courses in advanced and graduate work leading to the Masters Degree.

Special attention is called to the *Short Course in Public Health Administration.* This course was offered for the first time during the fall quarter of the University year beginning September 22, 1933, and ending December 20, 1933, and will be offered thereafter in the regular fall quarter. This course, as will be seen from the description which follows, is designed especially to meet the immediate and practical needs of public health officers in North Carolina. It will be especially helpful to physicians who wish to enter public health work. Since it is assumed that only mature and advanced students will take the course, the training is extensive and intensive for so short a period—one quarter. For those who desire larger preparation in this field, attention is

directed to Divisions II and III, in which the courses lead to a Certificate in Public Health Administration and to the Master's Degree in Public Health Administration.

COURSES OF INSTRUCTION

I.—SHORT COURSE IN PUBLIC HEALTH ADMINISTRATION.

REQUIRED

77. PUBLIC HEALTH ADMINISTRATION. Credit: ½ course.
Relation of public health problems in municipalities and counties to the state and national organizations. The organization, administration, and direction of public health activities embracing problems of particular concern to North Carolina. General sanitation and prophylaxis, collection and correlation of vital statistics and proper presentation and handling of same, health work in the public schools and industrial centers, public health campaigns for the eradication of transmissible diseases in man and domestic animals as they are related to man, public responsibility for the relief of undernourished and delinquent children, protection of the water and food supply, health regulations in jails and county homes, the relation of the public health officer to the private practitioner of medicine or dentistry, practical evaluation and interpretation of laboratory science as related to health work, general rural sanitation, and other subjects as outlined in the program of the North Carolina State Board of Health.
Special lectures by recognized Public Health Administrators and practical demonstrations in well organized local health departments form a part of the course. *Three hours a week.* Professors Jackson, Mangum; Drs. Parrott, Knox, Stimpson.

80a. THE PRINCIPLES AND PRACTICE OF SANITATION. Credit: 1 course. (See Civil Engineering 80a, page 191.)

83. COUNTY AND MUNICIPAL GOVERNMENT. Credit: 1 course.
A survey of the organization, functions and operations of county and city governments with special emphasis upon present day problems and conditions. Each student will be expected to give particular attention to his own county and city. *Five hours a week.* Professors Woodhouse and Wager.

ELECTIVE

Any one of the following: (Two with the approval of the Dean.)

86. PUBLIC HEALTH LAW. Credit: ½ course.
A study of the exercise by the States of the United States of their police power in the protection of public health, of the interpretation and administration of public health laws by the States and their local governmental units, of the cooperation by the National Government; comparisons with public health policies and administrations of other nations. Assigned readings, reports, and class discussions. *Three hours a week.* Professor Woodhouse.

164. FAMILY CASE WORK. Credit: 1 course. (See Public Administration, 164, page 154.)

266. PUBLIC WELFARE. Credit: 1 course. (See Public Administration 266, page 155.)

267. SOCIAL LAWS. Credit: 1 course. (See Public Administration 267, page 155.)

Substitutions in electives may be made with the approval of the Dean.

A statement of credit will be issued by the University for the satisfactory completion of this course.

II.—COURSES LEADING TO A CERTIFICATE IN PUBLIC HEALTH ADMINISTRATION

Required

77. PUBLIC HEALTH ADMINISTRATION (½ course). (See page 218.)

80a. PRINCIPLES AND PRACTICES OF SANITATION (Civ. Eng'g. 80a. See page 191).

Elective

86. PUBLIC HEALTH LAW (½ course). (See page 218.)

103. PUBLIC HEALTH AND HYGIENE (Bacteriology 4).

133. AMERICAN MUNICIPAL ADMINISTRATION (Government 133).

134. COUNTY GOVERNMENT AND ADMINISTRATION (Government 134).

141. PUBLIC FINANCE (Economics 141).

165. ADVANCED FAMILY CASE WORK. (See page 154.)

181. INFECTION, IMMUNITY AND SERUM DIAGNOSIS (Bacteriology 3).

183. PUBLIC HEALTH LABORATORY METHODS (Bacteriology 5).

185. EPIDEMIOLOGY (State Board of Health).

187. PROTOZOOLOGY, OR PARASITOLOGY (Zoölogy 215).

189. VITAL STATISTICS (State Board of Health).

253. STATISTICS (Sociology 253).

266. PUBLIC WELFARE. (See Public Administration 266, page 155.)

267. SOCIAL LAWS. (See Public Administration 267, page 155.)

The completion of seven of the above courses at the University and courses 185 and 189, or their equivalent, with the State Board of Health, will entitle one to a Certificate in Public Health Administration.

III.—ADVANCED AND GRADUATE WORK

The Graduate School offers its resources to qualified persons interested in undertaking the investigation of Public Health problems. Such qualified persons may now in certain departments or schools become candidates for graduate degrees with work having a relation to Public Health and Public Health Administration, as in such subjects as Sanitation, Chemistry, Government, Economics, and Public Welfare. In addition, advanced work of a graduate nature may be taken without reference to a degree. Programs of study leading specifically to a degree of Master of Science in Public Health Administration are under consideration. Those interested in graduate opportunities or regulations should apply for information to the Dean of the Graduate School.

Upon the completion of the course, the student will be required to devote three months of field work with a state, county, or municipal Board of Health.

IV. RESEARCH AND SURVEYS

One of the greatest needs of the State in order to carry on the functions of government with a greater economy, greater effectiveness, and greater social justice is knowledge about conditions and informa-

tion about all of its problems. If the State, working through its regular officials and its special committees, commissions, and citizens' groups, is to make satisfactory progress, there is need for coöperative research and a continuous search for the rapidly changing facts. The School of Public Administration, therefore, in coöperation with the Institute for Research in Social Science and with other Schools will seek to offer its services in study and research in various fields of state, county, and municipal government, in special inquiries into cost of government, taxation, resources, personnel, and many other emerging problems.

LECTURES

It is the intention of the School of Public Administration to work in the closest possible coöperation with the officers of the state, municipal, and county governments in North Carolina. In order that the student may have the most vital and interesting connection with administrative work as it is actually carried on, a number of administrative officers will be asked to speak to the students from time to time. Heads of some administrative departments of the state government in Raleigh, city and county managers, mayors, chairmen of the boards of commissioners, and other administrative officers in this State have generously promised their coöperation in carrying out the work of the School, and there will be visiting lecturers from a number of these officers from time to time throughout the year.

FIELD WORK

Before the Master's degree is awarded in the School of Public Administration, the student will be required to do three months of field work in some governmental department, in addition to the completion of the required residence work. Various administrative officers have indicated their willingness to coöperate in placing students in positions which will give them practical training in the field in which they are specializing.

EXTENSION SERVICE

The purpose of the work in Extension Service will be to offer additional training to persons already engaged in the public service.

As early as 1921, the first regional conference of town and county administration was held at Chapel Hill under the general auspices of the School of Public Welfare. Other special institutes and conferences have been held for superintendents of public welfare, for police officials, and special surveys have been made of the North Carolina prison system and of a number of county and city situations. However, the need at the present time is for a more extended service. The present plan provides for these new types of coöperation, instruction, and work:

a. Through extension classes and group instruction in various parts of the State.

b. Through special institutes and conferences held in various communities.

c. Through special institutes held at Chapel Hill, with the assistance of experts from the State in different fields of administration.

THE GRADUATE SCHOOL

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
William Whatley Pierson, Jr., Ph.D., *Dean.*

*THE ADMINISTRATIVE BOARD

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Claudius Temple Murchison, Ph.D.
Gustave Adolphus Harrer, Ph.D.
†Herman Glenn Baity, Sc.D.
Howard Washington Odum, Ph.D., LL.D.
George Coffin Taylor, Ph.D.

GENERAL STATEMENT

The Graduate School finds its province in the fostering of research, in training students to become investigators and teachers in special fields of learning, in the application of research methods to the problems of society and industry, and in supplying opportunity for further and advanced study by those who have already completed a college course. The University of North Carolina has been interested in research for more than a century, and has made noteworthy contributions in science, history, and the languages. Through its research clubs and learned journals, as well as through publications and other contributions to learning made by members of its faculty, the University has acquired the authority to give advanced instruction. For this it is competent both from the standpoint of the personnel of its faculty and in material equipment in libraries and laboratories.

Instruction leading to the Master's degree was offered at this institution prior to the American Civil War, and such higher degrees were granted in course. Formal action with high standards in requirements was taken in 1876 to establish a system of graduate, as distinct from undergraduate, instruction. A Graduate Bulletin, issued in 1885, showed that nearly all departments offered advanced courses. The number of students during those years was small, but the work accomplished in both the humanities and the sciences was of distinguished quality. Given distinct status in 1904 and the leadership of a Dean, the Graduate School has experienced steady and, since 1920, rapid growth.

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.
† Absent on leave, 1933-1934.

The institution is a member of the Association of American Universities; the Graduate School annually publishes a bulletin, entitled *Research in Progress,* which records analytically the scholarly contributions of the faculty and graduate students; the School has been assigned control of a building wherein graduate men students may live and have a club which affords opportunity for friendly association; the School operates an Appointments Bureau, which supplies facilities for placement.

Work for advanced degrees is under the supervision of the Graduate Faculty, which consists of those officers of professorial rank who are chiefly interested in the Graduate School, either because they offer courses for graduate students or because of their interest in research. The immediate direction of the Graduate School is in charge of an Administrative Board, of which the Dean is chairman. Special requirements and regulations made by this board are outlined in the Catalogue of the Graduate School, published in alternative years and recognized as the official publication of the Graduate School.

GRADUATE DEGREES

The degrees under the supervision of the Graduate Faculty are Master of Arts (A.M.), Master of Science (S.M.), and Doctor of Philosophy (Ph.D.). For a complete statement of the requirements for these degrees reference must be made to the special Catalogue of the Graduate School.

SUMMARY OF THE REQUIREMENTS FOR HIGHER DEGREES

Master's Degree

1. A bachelor's degree from a recognized institution.
2. A minimum period of three quarters of resident study.
3. A reading knowledge of one modern foreign language.
4. Nine graduate courses, six of which must be in the department of the major.
5. A written examination in the field of the major.
6. An oral examination covering the entire field of study.
7. A thesis.

Doctor of Philosophy

1. Admission is the same as for the master's degree.
2. A minimum of three years of graduate study, at least one of which must be at the University of North Carolina.
3. A reading knowledge of French and German.
4. A major covering adequately the field of major interest and at least six courses in a minor, which may under special circumstances be in the same department.
5. A preliminary oral examination.

6. A written examination in the field of major interest.
7. An oral examination covering the entire field of study.
8. A dissertation.

CATALOGUE OF THE GRADUATE SCHOOL

For information concerning the Graduate Faculty, fields of research, fellowships and other aids, expenses and tuition, and for regulations governing courses of study, credits, admissions, examinations, and higher degrees, reference must be made to the special Catalogue of the Graduate School.

SUMMARY LIST OF COURSES OFFERED

The following list comprises the courses which may be pursued for graduate credit. Courses are listed by number only; and only the courses given in the regular session appear. For courses offered in the Summer School the reader is referred to the annual catalogue of that school. For further details as to title and content of courses, number of meetings a week, credit value, and years offered, he is referred to Part Three of this catalogue.

BOTANY. 103, 111, 112, 113, 122, 133, 141, 151, 153, 162, 211, 212, 213, 251, 252, 253, 301, 302, 303.

CHEMISTRY. 101, 163, 164, 165, 167, 168, 169, 183, 184, 185, 191, 192, 241, 242, 243, 251, 252, 253, 261, 262, 263, 281, 282, 283, 286, 287, 288, 289, 291, 292, 293, 341abc, 351abc, 361abc, 381abc, 391abc.

CLASSICS. *Greek.* 112, 113, 153-154, 155, 158, 171, 201, 202, 203, 211, 301, 302, 303.
Latin. 101, 102, 103, 104, 112, 201, 202, 203, 301, 302, 303, 310.

COMMERCE. 121, 122, 141, 145, 151, 154, 155, 157, 161, 163, 165, 169, 171, 172, 173, 175, 177, 178, 179, 181, 191, 195, 301abc, 399.

ECONOMICS. 111, 121, 124, 131, 141, 142, 143, 144, 151, 161, 165, 171, 182, 185, 191, 192, 195, 197, 251-252-253, 271, 301abc, 324, 341, 351, 361, 371, 382, 385, 391, 399.

EDUCATION. 101, 105, 108, 142, 143, 145, 149, 160, 163, 164, 171, 173, 194, 197, 201, 204, 271-272, 299, 303abc, 341abc, 375, 376, 398-399.

ENGINEERING. *General.* 116a, 256abc.
Chemical. 191, 194-195-196, 197, 291-292-293, 391abc.
Civil. 160abc, 165abc, 170abc, 175abc, 260ab, 265abc, 270abc, 275abc, 280a, 285ab, 290abc, 360abc, 365abc, 370abc.
Electrical. 102a, 112a, 122a, 162abc, 172abc, 262a, 272ab, 282a, 382abc.
Mechanical. 166a, 176a, 186a, 283abc, 288abc.

ENGLISH. 101, 105, 111, 112, 113, 114, 121, 125, 131, 133, 141, 149, 151, 161, 162, 163, 167, 170, 201, 202, 203, 208-209-210, 225, 226, 227, 231-232, 243, 283, 284, 307, 310, 312, 313, 317, 318, 320, 331-332, 340, 341.

GENERAL AND COMPARATIVE LITERATURE. 105, 111, 112, 113, 121, 122, 123, 125, 151, 152, 155, 156, 157, 159, 161, 162, 163, 185.

GEOLOGY. 105, 111, 112, 121-122, 123, 131, 133, 134, 141-142-143, 148-149, 171-172-173, 181-182-183, 191, 192, 193, 304-305-306, 307-308-309.

GERMAN. 101-102, 103-104, 111, 121, 122, 123, 201, 203, 207, 211, 221, 223, 225, 251.

HISTORY AND GOVERNMENT. *History.* 101, 102, 121, 122, 131, 132, 133, 134, 135, 136, 137, 149, 150, 151, 152, 153, 154, 155, 156, 161, 162, 163, 164, 167, 168, 170, 201ab, 211, 220, 221, 271, 272, 273, 301abc, 311abc, 321abc, 323abc, 331abc, 333abc, 341, 370abc.

Government. 121, 122, 131, 132, 133, 134, 141, 142, 143, 151, 153, 154, 155, 156, 157, 158, 301abc, 305abc, 311abc, 321abc, 341.

MATERIA MEDICA. 391-392-393.

MATHEMATICS. 103, 104, 111, 121, 131, 141, 151, 152, 161, 171, 206, 211, 216, 221, 226, 231, 236, 241, 246, 251, 256, 261, 266, 271, 272, 273, 281, 286, 291, 351, 356, 361, 366, 371, 376.

PHARMACEUTICAL CHEMISTRY. 141, 161-162-163, 172, 173, 242-243, 245, 261-262-263, 391-392-393.

PHARMACY. 141, 144-145-146, 191, 192-193, 351-352-353, 391-392-393.

PHILOSOPHY. 131-132-133, 171-172-173, 224-225-226, 227-228-229, 311.

PHYSICS. 101, 102, 103, 104, 105, 106, 107, 108, 109, 201, 202, 203, 204, 301, 302.

PSYCHOLOGY. 125, 126, 135, 136, 138, 140, 145, 146, 147, 151, 152, 153, 190, 201, 202-203, 205, 208, 325, 341-342.

PUBLIC ADMINISTRATION. 101, 164, 165.

ROMANCE. *French.* 109, 115, 126, 131, 132, 145, 161, 171, 172, 181, 191, 192, 221-222-223, 225, 231, 248, 265-266, 331, 391, 395.

Celtic. 205.

Italian. 131, 132, 156, 161, 221.

Spanish. 109, 110, 111, 115, 116, 131, 132, 134, 135, 145, 221-222, 241, 391, 393, 395.

RURAL SOCIAL ECONOMICS. 101, 134, 271abc, 301abc, 305abc, 311abc.

SOCIOLOGY. 151, 152, 160, 161, 168, 171, 173, 175, 185, 186, 192, 193, 198, 208, 209, 210, 215, 253, 327-328-329, 331-332-333, 341.

ZOOLOGY. 103, 104, 105, 106-107-108, 109, 110, 209-210-211, 212-213-214, 215, 316.

ADDITIONAL COURSES. Certain courses in the professional schools, with the permission of the committee under which the student is working and of the administrative board, may be elected as minors for graduate credit as follows:

Law. Negotiable Instruments, Municipal Corporations, Carriers, Insurance, Sales, Corporations, Constitutional Law, Criminal Law, Evidence, Persons.

Medicine. Neuro-Anatomy, Histology, Embryology, Pharmacology, Bacteriology 2, Bacteriology 3, Pathology 1, Physiology I, Physiology II, Physiology III, Physiology IV, Biological Chemistry 1, Biological Chemistry 2, Biological Chemistry 3.

THE SUMMER SCHOOL, 1933

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Nathan Wilson Walker, A.B., Ed.M., *Director.*

THE ADMINISTRATIVE BOARD

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Harold Diedrich Meyer, A.M.
Thomas James Wilson, Jr., Ph.D.
Charles Thomas Woollen
Robert Burton House, A.M.
Harold Shelton Dyer, M.Mus.
William Morton Dey, Ph.D.

GENERAL STATEMENT

The old "Summer Normal" at the University was a pioneer in the Summer School field. It was established in 1877 by Dr. Kemp P. Battle, and it seems to have been the first of its kind in America. It ran for a period of eight years and was suspended in 1884. The Summer School for teachers was revived in 1894 and ran for a period of eleven years, that is until 1904, when it was again suspended. It was revived again in 1907 and has been operated regularly every summer since that date. Prior to 1914, with the exception of one year, no credit for University degrees was granted for work accomplished in the Summer School. In that year the faculty voted to grant degree credit with specified limitations for work accomplished in the summer. For a number of years regular college courses and the old type of normal school courses were continued side by side. As the number of advanced undergraduates and graduate student increased in the summer term the older normal school courses were gradually eliminated, until now, as has been the case for several years, all work offered in the summer carries degree credit.

Ever since 1923 the Summer School has been operated for two terms of approximately six weeks each, or the equivalent of a regular quarter.

For a list of the courses offered, the instructional staff, and other detailed information, the reader is referred to *The Summer School Bulletin.*

THE UNIVERSITY EXTENSION DIVISION

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Russell Marvin Grumman, B.H., *Director.*
Louise Manning Venable, A.B., *Executive Secretary.*

*THE ADMINISTRATIVE BOARD

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Nathan Wilson Walker, A.B., Ed.M.

EXECUTIVE STAFF AND BUREAU CHIEFS

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Edgar Ralph Rankin, A.M., *Head, Department of School Relations, and Chief, Bureau of High School Debating and Atheltics.*
Samuel Huntington Hobbs, Jr., Ph.D., *Chief, Bureau of Economic and Social Surveys.*
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T. Smith McCorkle, B. Mus., *Chief, Bureau of Community Music.*
Frederick Henry Koch, A.M., *Chief, Bureau of Community Drama.*
Harold Diedrich Meyer, A.M., *Chief, Bureau of Recreation.*
Nellie Roberson, A.B., *Chief, Extension Library Service.*
Nathan Wilson Walker, Ed.M., *Chief, Bureau of Educational Information and Assistance.*
Edward James Woodhouse, B.A., LL.B., *Chief, Bureau of Municipal Government Research and Information.*
Kathleen Wright, *Chief, Bureau of Class Instruction.*

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.
† Absent on leave, 1933-1934.

GENERAL STATEMENT

By means of correspondence instruction, extension classes located in all parts of the State, radio lectures, extension library service, reading courses, community dramatics, interscholastic activities, and a variety of publications, the University of North Carolina, through the Extension Division, is relating itself closely with the life of North Carolina. The University campus is now virtually coterminous with the boundaries of the commonwealth.

Starting as a Bureau of Extension in 1912 under the leadership of Dr. L. R. Wilson, former University Librarian, the idea of university extension was clarified and expanded under the administration of the late President Edward Kidder Graham. In 1921, in conformity with standards established by the National University Extension Association, the work was organized as a major division of the University by President Harry W. Chase.

In his inaugural address, November, 1931, President Frank Porter Graham defined the purposes of university extension thus: "It is the function of the state university not only to find its bits of truth and teach the truth gathered from scholars everywhere, but to carry the truth to the people that they may take it into their lives and help to make it prevail in the world of affairs. It is the ideal of the University Extension Division to make the resources of the universities, the discoveries of science, and the findings of the social scientists available for the people of the commonwealth."

The Extension Division is the administrative agency through which are conducted the extension activities of all the University's departments. Within recent years, moreover, the Division has developed a specialized program of adult general and professional education unrelated to the work of the resident departments. Other educational services are being offered men and women whose formal schooling has ended, but who still desire to continue their education regardless of higher academic awards. In meeting the demands of this growing group, the future of the University Extension Division as an agency for adult education holds the greatest promise of development.

BUREAU OF CLASS INSTRUCTION

Extension courses in regular University subjects are offered in communities throughout the State. These courses are taught by members of the University Faculty and, when all requirements are met, give the same credit as courses in residence. Those not wishing degree credit are also eligible to enroll in extension classes. The classes usually meet one evening a week for sixteen weeks, for which a half course or two semester hours of degree credit may be earned. The fee for each half course is $7.50. An individual or group wishing to organize an extension class should make written application to the University Extension Division, giving the following information:

probable number of enrollments, general type of persons who wish to join the class, course desired, when and where the class wishes to meet, and who will have charge of the local arrangements.

Courses Offered

The Extension Division attempts to offer most of the courses listed in the University Catalogue in any community where a sufficient number of people desire to enroll.

In order to conserve space, all other information and regulations concerning extension courses are omitted here but may be secured by sending a written request to the University Extension Division.

In-Service Teacher Training

Working in close coöperation with the Department of Education, the Division conducts a specialized and carefully arranged program for the training of teachers now working in the schools of the State. The aim of this program is to improve instruction in the schools and to offer opportunities for the professional growth of teachers.

BUREAU OF CORRESPONDENCE INSTRUCTION

All information and regulations concerning correspondence courses offered by the University are contained in the catalogue of Correspondence Instruction issued separately.

EXTENSION LIBRARY SERVICE

The aim of the Extension Library Service is to encourage discussion of current political, social, and economic problems, as well as to assist in the study of good literature. Reference material is supplied for such study.

One section renders assistance with programs and reference material, usually of a literary nature, to women's clubs and study groups, for which service a small charge is made. Another section renders assistance to schools, both to students and teachers, as well as to other individuals not organized in group study. This material is usually on current problems of a political, social, or economic nature.

BUREAU OF LECTURES, SHORT COURSES, AND RADIO

The University conducts a lecture bureau for the purpose of aiding schools, civic clubs, and other organizations in obtaining speakers. Addresses for special occasions, such as school and college commencements, are also arranged upon application.

No fee for lecture service is charged, but the traveling and incidental expenses of the lecturer are defrayed by the organization for which the lecture is made. Lecture courses also may be arranged.

From time to time the University has held at Chapel Hill short courses or institutes for various organizations and groups. These

consist in an intensive training program or course ranging in duration from one day to two weeks. The program is composed of a specialized series of lectures, discussions, and demonstrations directed by leading speakers and teachers secured from the faculty of the University and from the State and nation. Short courses have been offered to high school athletic directors, welfare workers, parents, secretaries of chambers of commerce, police officers, realtors, and members of the State Press Association.

In addition to those mentioned above, the Division will be glad to aid other organizations or groups in arranging for a short course, institute, special meeting, or convention.

Individual lectures and lecture courses by members of the faculty and entertainment programs by University musical and dramatic organizations are broadcast each year through the courtesy of station WPTF, Raleigh.

BUREAU OF COMMUNITY DRAMA

The services of the Bureau of Community Drama are available to all schools, colleges, and communities throughout the State. Suggestions and advice on play production, and aid in solving any particular problem of the director of dramatics may be obtained from this bureau.

Assistance is given in organizing, in play selection, in the designing and making of scenery, in costuming, and in make-up and lighting. Arrangements may be made for assistance in the direction of a chosen play.

The bureau has at its disposal more than two thousand volumes of play books, books on acting, play production, little theatre organization, play writing, stagecraft, lighting, costuming, make-up, etc. These are loaned upon payment of the postage and packing charges.

By giving practical assistance to those interested in writing and producing plays, the bureau is seeking to promote and encourage dramatic art in the schools and communities of North Carolina, and to stimulate interest in the writing of native drama.

BUREAU OF COMMERCIAL AND INDUSTRIAL RELATIONS

This bureau is under the supervision of the School of Commerce of the University. The members of the staff coöperate with the manufacturing, banking, and commercial interests of the State in the solution of any problems brought to their attention. Laboratories, statistical information, research methods, interpretative devices, and expert opinion are available for use by any worthy individual or organization. Problems may be submitted for study and opinion, or arrangements may be made for a member of the staff to visit the establishment or community for first-hand observation and study.

BUREAU OF COMMUNITY MUSIC

The Department of Music offers the following services: (1) leadership for community sings; (2) formation of community choruses; (3) lectures on public school and community music; (4) piano, violin, and organ recitals; (5) advisory service to schools; (6) concerts by tht University Symphony Orchestra, the Symphonic Band, and the University Glee Club.

BUREAU OF MUNICIPAL GOVERNMENT RESEARCH AND INFORMATION

This bureau answers specific inquiries with reference to legislation, charters, and other matters covering city and town government. Through the Library Extension Service bibliographies, reading lists, and books on municipal subjects are loaned. The bureau also undertakes to advise town and city officials concerning their problems, and to direct them to sources of assistance.

BUREAU OF ECONOMIC AND SOCIAL SURVEYS

Before a definite movement is inaugurated to upbuild a county or community from an economic and social standpoint it is necessary to have at hand an accurate summary of existing facts. What is known as the "social survey" is the best method of securing such facts.

For years the Department of Rural Social-Economics of the University has been collecting data on social and economic conditions in North Carolina. This material is available through loans from the library, articles in the *University News Letter,* and bulletins which record the results of a number of county economic and social surveys. *The University News Letter,* which is edited by this department, appears twenty-five times each year.

BUREAU OF RECREATION

This bureau offers service in public recreation and leisure time problems through the School of Public Administration. Bibliographies and reading lists on the subjects of sociology, community organization, etc., are provided upon request.

BUREAU OF HIGH SCHOOL DEBATING AND ATHLETICS

The University Extension Division, through this bureau, offers service to the high schools of the State by means of contests in debating, athletics, and academic subjects.

The High School Debating Union of North Carolina is the medium through which assistance in debate in offered. This organization was established in 1912-1913. Approximately two hundred high schools, grouped in triangles, discuss some important question each year. The schools winning both debates send their teams to the University to compete during High School Week in the final contest for the Aycock Memorial Cup.

The High School Athletic Association of North Carolina is the agency through which assistance in athletics is offered. This association conducts State high school contests in football, basketball, boxing, wrestling, baseball, track, soccer, golf, and tennis. The high schools compete in groups for the honor of representing the eastern and western sections of the State, and the teams winning the sectional contests meet at Chapel Hill in the finals. There are 344 members of this association.

The high school contests in academic subjects are conducted jointly by this bureau and by the University departments concerned. Academic contests are conducted in Latin, Spanish, French, and mathematics. High school newspaper, magazine, and essay contests are also conducted.

BUREAU OF EDUCATIONAL INFORMATION AND ASSISTANCE

The bureau is maintained through the coöperation of the Department of Education. The several members of the faculty of the Department offer to the State the following lines of service: educational tests and measurements; school surveys; teachers' appointments; advice and counsel with reference to school buildings, equipment, and general administrative problems.

EXTENSION TEACHING AND THE PRESENT ECONOMIC EMERGENCY

Realizing that financial conditions throughout the State make it prohibitive for many persons to attend college or to continue their advanced studies, the Division is offering several economical plans for college and adult education of special interest to recent graduates of North Carolina high schools. These plans are described in an issue of the *Extension News* which will be sent upon request.

OTHER SERVICES

Visual Instruction. The Chronicles of America Photoplays are distributed in North Carolina and South Carolina in coöperation with the Yale University Press Film Service.

Parent-Teacher Association. The work of the extension field representative of the North Carolina Congress of Parents and Teachers is administered by the Division. Local associations interested should write to the Director for information.

PART FIVE

THE SCHOOL OF LAW
THE SCHOOL OF MEDICINE
THE SCHOOL OF PHARMACY
THE SCHOOL OF LIBRARY SCIENCE

THE SCHOOL OF LAW

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Maurice Taylor VanHecke, Ph.B., J.D., *Dean.*

*THE ADMINISTRATIVE BOARD

Howard Washington Odum, Ph.D.
Robert Digges Wimberly Connor, Ph.D.
Dudley deWitt Carroll, M.A.
Atwell Campbell McIntosh, A.M., LL.D.
Robert Hasley Wettach, A.M., LL.B., S.J.D.
Millard Sheridan Breckenridge, Ph.B., LL.B.

SPECIAL STAFF

Atwell Campbell McIntosh, A.M., LL.D., *Professor of Law.*
Robert Hasley Wettach, A.M., LL.B., S.J.D., *Professor of Law.*
‡Albert Coates, A.B., LL.B., *Professor of Law.*
Millard Breckenridge, Ph.B., LL.B., *Professor of Law.*
Maurice Taylor VanHecke, Ph.B., J.D., *Professor of Law.*
Frederick Bays McCall, A.B., LL.B., *Associate Professor of Law.*
Frank William Hanft, A.B., LL.B., S.J.D., *Associate Professor of Law.*
James Harmon Chadbourn, A.B., J.D., *Assistant Professor of Law.*

GENERAL STATEMENT

History.—The law school, which developed into the School of Law of the University, was founded in 1843 at Chapel Hill as a private school by William H. Battle, then a judge of the Superior Court, later a justice of the Supreme Court of the State. In 1845 Judge Battle was made Professor of Law in the University, and it was provided that the degree of Bachelor of Laws should be conferred on those completing the prescribed two-year course. From the records of the University, however, it seems that few degrees were actually

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.
‡ Absent on leave, first semester, 1933-1934.

conferred. For a long time the school maintained a certain independence of the University. The Professor of Law received no salary, though he enjoyed the fees from his classes, and the students were not entirely subject to the discipline of the University.

This was the position of the school from its formation until 1899, a period which covered the professorship of Judge Battle who retired in 1879; two years when the law classes were conducted by Kemp P. Battle, then President of the University; and the professorship of John Manning, elected 1881, died 1899. In 1899 the school was completely incorporated into the University, with the late James C. MacRae, previously a justice of the Supreme Court of North Carolina, as the first Dean of the Law School.

The School of Law having complied in full with the requirements set up by the American Bar Association has been listed as one of sixty-five schools classed as "approved law schools."

The School of Law is a member of the Association of American Law Schools, an association composed of the leading law schools in the United States.

A carefully compiled list of approved law schools, whose credits are acceptable as evidence of due preparation for the New York Bar Examinations, is published by the University of the State of New York. The School of Law is accredited in this list for the full three years' work.

REQUIREMENTS FOR ADMISSION

Regular Students

The matter of admission to the School of Law, as to all the other schools and colleges of the University, is arranged through the Dean of Admissions of the University.

The Dean of Admissions passes upon all applications for admission, and all inquiries as to eligibility to enter should be addressed to him. Those who intend to enter must furnish to him (a) a certificate of successful vaccination against smallpox, and (b) a certificate showing the completion of a four years' high school course of fifteen units and the completion of not less than three years of college work, which must be approved as satisfactory. These certificates should be sent by mail to the Dean of Admissions at least two weeks before registration day, if possible.

Beginning in September, 1932, three years of college work are required for admission to the School of Law. That change, however, does not affect those who have entered any department of the University of North Carolina prior to January 1, 1932, and who shall, in addition, have completed within a reasonable time the requirements for admission to the School of Law in force June 1, 1931.

The academic requirements for admission to the School of Law may be satisfied by:

(1) An *academic degree* from the University of North Carolina or any other standard college or university approved by the Dean of Admissions.

(2) *Three years* of academic work prescribed in the "Combined Course in Arts and Law" or in "Commerce and Law" as described below.

(3) *The first three years complete* of the regular work prescribed for a degree (a) in the College of Liberal Arts, the School of Commerce, or the School of Education in the University or (b) in a similar curriculum in some other standard college or university.

Special Students

A limited number of special students, not candidates for a degree, with less than the required three years of academic training may be admitted. They must be at least twenty-three years of age, and must furnish evidence to satisfy the law faculty that their experience and training have specially equipped them to engage successfully in the study of law despite the lack of the required college credits. The number of such special students admitted each year may not exceed 10% of the average number of students admitted by the school as beginning regular law students during the two preceding years. Applications for admission to the Summer School as special students will be acted upon on May 15, for admission in the regular session on September 1, each year.

Admission to Advanced Standing

A student from another school of law, in which the requirements for admission are at least as high as in this school, may be admitted for advanced standing for the degree of LL.B. As a rule no more than one year's work will be so credited without residence, but with the consent of the law faculty two years' work may be credited in exceptional cases, provided the last year of work for the law degree is done in residence. A student seeking admission to advanced standing must present satisfactory evidence that the work taken in another school is substantially equivalent to that given in the corresponding year here, both in the character of the work covered and in the amount of time devoted to each subject.

EXPENSES

See pages 44-47.

Summer Law School fees for 1933 (exclusive of laundry deposit) were: residents $40.00 each term or $75.00 for both terms; nonresidents, $55.00 each term or $100.00 for both terms. These fees are subject to change.

Books

Books for law students, bought new, will average about $50.00 a year. A saving below this figure can be made by taking advantage of the secondhand market.

Board

Excellent board is furnished at Swain Hall for $20.00 a month. A few students can earn their board by waiting on the tables.

DEGREES

The Degree of LL.B.

The degree of Bachelor of Laws (LL.B.) is conferred upon a regular student who has studied law for a period of at least three academic years and passed satisfactory examinations on all required subjects and enough elective subjects to make up an aggregate of seventy-eight semester hours. Two long sessions and three summer sessions of at least ten weeks each are regarded as a compliance with the residence requirement.

The Degrees of A.B. and LL.B.

The University offers a combined curriculum in the College of Liberal Arts and the School of Law by completing which students may receive the two degrees of A.B. and LL.B. in six years instead of the seven years required for the two degrees in the regular curricula.

Upon the completion of the courses in the College of Liberal Arts outlined below, *before matriculation in the School of Law,* and the completion of the first year of Law to the satisfaction of the School of Law, students may receive the degree of A.B., and upon the satisfactory completion of the third year of Law, the degree of LL.B.

Prescribed courses in the College of Liberal Arts for the two degrees of A.B. and LL.B.:

First Year	Second Year	Third Year
Eng. 1-2-3	Eng. 21-22	Econ. 31-32
Hist. 1-2-3	Hist. 45-46 or 47-48	†English 47 and one other course.
Math. 1-2		‡Hist. and Govt.—2 courses
Select two: Greek 13-14, French 3-4, German 3-4, *Latin 1-2, Spanish 3-4	Select two: *Latin 15-22, Greek 21, French 21, German 21, Spanish 21	Psychology 21-22 (if not already taken).
	Select one: Botany 41, 43; Chem. 1-2; Physics 21-22; Zoölogy 41, 42; Botany 41 and Zoölogy 41; Geology 11-12; Psychology 21-22	*One Elective (or as many as needed to complete twenty-seven courses).

* Latin 1, 2, 15, 22 are to be taken by students who have presented only two units for entrance. In case the student is required to pursue only Latin 15, 22 or 2, 15, 22, the number of electives is increased to make up the difference. In every case 27 courses of college grade must be completed.

† The School of Law recommends that the optional course chosen be Advanced Composition, Eng. 52.

‡ The School of Law recommends that the courses in History and Government be courses in English and American History or Government.

The foregoing academic curriculum requires at least *three* courses above the elementary courses in each of *two* foreign languages. Instead of this requirement the student is allowed the option of completing *five* courses above the elementary courses in one such foreign language. In case this option is taken, it is advisable that the courses in science shown in the second year be taken in the first year, and that Economics 31-32 be shifted similarly from the third year to the second year. This arrangement necessitates also some obvious changes in the electives.

The School of Law suggests the courses named below as suitable electives in this course, but choice is not restricted to these. English 52, 53, 54; Psychology 138 (Legal Psychology), 140; History 161, 162; Economics 81, 82, 195; Sociology 42, 192.

The A.B. degree, on this basis, is conferred at the end of the fourth year (first year in Law) provided the student has passed all the work of the first year of Law to the satisfaction of the School of Law.

The Degrees of S.B. in Commerce and LL.B.

The University offers a combined curriculum which leads to the degree of S.B. in Commerce at the end of four years and LL.B. at the end of six years.

The first three years of this combined curriculum are in the School of Commerce and are devoted to the subjects outlined below. The last three years are in the School of Law and are devoted to the courses prescribed for the LL.B. degree.

The degree of S.B. in Commerce, on this basis, is conferred at the end of the fourth year (first year in Law) provided the student has passed all the work of the first year of Law to the satisfaction of the School of Law.

Prescribed courses in the School of Commerce are as follows:

First Year

Economics 9, 11
English 1-2-3
History 1-2-3
Mathematics 1-2
*Modern Language: two courses

Second Year

Economics 31-32
†Economics 35 or History 167
English 21-22
English 45 or 52
*Modern Language: one course
Government 21
Natural Science: two courses

Third Year

Commerce 51
Commerce 71-72
Economics 81-82
Economics 191 or
Economics 195
Psychology 21-22
Two courses chosen from the courses offered by the Department of Economics and Commerce

* The total requirement in modern languages is three courses of collegiate grade based upon 2 units completed in high school or the equivalent in the elementary courses taken here.

† If History 167 is selected, it may not be taken until the junior year. In this case Psychology 21-22 should be taken in the sophomore year.

The Degree of J.D.

The degree of Doctor of Law (Juris Doctor—J.D.) will be conferred upon students who comply with all the following conditions:

1. Complete the work requisite for the A.B. degree or its equivalent before entrance upon the work of the School of Law.

2. Study law for a period of at least three academic years.

3. Obtain an average grade of B on enough subjects to complete the requirements for the LL.B. degree.

4. Prepare and have accepted for publication in *The Law Review* an article of at least ten pages, or case notes which in the aggregate shall be at least eight pages in length.

The Degree With Honors

The degree with honors will be conferred, upon recommendation of the faculty, upon students selected from the highest one-tenth of the graduating class.

EXAMINATIONS, GRADES, ELIMINATION, ATTENDANCE

EXAMINATIONS. Preliminary hour examinations are held in each course in November, and also at the end of the first semester hour examinations are given in all courses running through the year. Individual research assignments may be substituted for preliminary examinations. Final examinations are held at the end of the first semester in the subjects which are then completed, and at the close of the year in all other subjects.

GRADES. The grading of students will be indicated by the letters A (80 and above), B (75-79), C (67-74), D (60-66), F (below 60), representing respectively excellent, good, satisfactory, poor, and failed. A student receiving the grade of F (failed) in any subject will be required to repeat the course.

Full credit may not be secured for more than ten semester hours of D grade work in one long session nor for D grade work in more than one-half the hours taken in a summer session. D grade work in excess of these amounts will carry only one-half the usual credit towards a degree.

ELIMINATION OF STUDENTS. A student must obtain a grade of D or better in at least two-thirds of the total number of semester hours for which he registers, and any student who fails to do so shall thereby automatically be excluded from further work in the School. Likewise, the faculty may drop from the school at any time a student who, in their judgment, is not making sufficient progress to warrant his continuing in the School.

Any instructor, with the concurrence of the Dean, may drop a student from a course at any time, for unsatisfactory work, poor attendance, or other good cause.

NUMBER OF HOURS OF WORK REQUIRED AND PERMITTED

The normal amount of work is twelve to fourteen class hours a week. Not more than fifteen hours of law work may be taken, nor, if academic work is being taken at the same time, may more than ten hours of law be taken with one academic course.

No student taking fewer than ten hours weekly will be considered as studying law within the rules of the Supreme Court which requires of applicants for license to practise in North Carolina two years of study of law as a necessary preliminary.

DIVISION OF ACADEMIC YEAR: DATES

Work in the School is divided into two semesters instead of into three quarters. The first semester begins at the same time as the fall quarter of the College of Liberal Arts, and ends on the last Saturday in January. The second semester begins on Monday after the last Saturday in January and ends at the same time as the third quarter of the College of Liberal Arts. The first day of each semester is Registration Day. The fee for late registration in either semester is $5.00.

First year students may enter the School in the summer session, or at the opening of the first semester in the fall. No first year student will be permitted to enter at the beginning of the second semester.

STUDENTS FROM OTHER STATES

While greater emphasis is placed upon North Carolina decisions and statutes than upon those of the other states, the legal doctrines are studied as part of the Anglo-American common law system and the case-books used are selections of cases taken from all the common law jurisdictions. Students from other states are encouraged to investigate the decisions and statutes of their own states in regard to the questions discussed, and the law library provides the materials necessary for such investigation. The law course as a whole is designed to prepare the student in the fundamentals of the common law in such a manner as to fit him for practice in any state.

SUBJECTS OF INSTRUCTION

All subjects in the first year are prescribed. Those in the second and third year are elective, but second-year students may not elect third-year subjects except by permission of the Dean.

First Year

Agency

Distinction between agency and other legal relationships. Express, implied, and apparent authority of agent; liability of disclosed and undisclosed principal to third party in contract and in tort; liability of agent to third party and of third party to principal and agent; ratification of unauthorized acts; termination of agency. Assigned problems will also be given in the law of workmen's compensation. Steffen's *Cases on Agency. Three hours, second semester.* Professor Breckenridge.

CIVIL PROCEDURE I

The development of the English and American court system, and of the various forms of action, at common law and under the codes; a cross-section of modern code pleading and procedural problems. Clark's *Cases on Procedure. Three hours, first semester.* Professor Chadbourn.

CONTRACTS

The formation, construction, operation, and performance of contractual obligations, including offer and acceptance, consideration, seals, the statute of frauds, conditions, discharge, third-party beneficiaries, assignments, joint contracts, and effect of illegality. Havighurst's *Cases on Contracts. Three hours, both semesters.* Professor VanHecke.

CRIMINAL LAW

Introduction: the problem of criminal justice. The history of criminal procedure, nature and elements of a crime, act and intention. Attempts, jurisdiction, consent, recrimination and condonation, culpability as affected by necessity, duress, coverture, infancy, insanity, etc. Justification and excuse: self-defense. Parties. Criminal conspiracy. Former jeopardy. Specific crimes: homicide, rape, assault, larceny, embezzlement, false pretenses, receiving stolen property, robbery, burglary, arson, forgery, perjury. Sayre's *Cases on Criminal Law. Three hours, second semester.* Professor Coates.

LEGAL BIBLIOGRAPHY

A practical course in the use of law books. The problems assigned require the student to familiarize himself with the method of finding authorities upon concrete fact situations through the use of digests, encyclopedias, textbooks, annotated cases, and constitutional and statutory sources. *Law Books and their Use* (5th ed.), and assigned problems. *One hour, first semester.* Miss Elliott and Professor VanHecke.

PERSONAL PROPERTY

The nature of possession; rights based upon possession, tenants, bailees, finders. Acquisition of title to chattels without the consent of the owner, *bona fide* purchase, limitations, accession, tortious confusion. Gifts *inter vivos.* Distinction between sale and bailment. Liens and pledges. Bigelow's *Cases on Personal Property* (2nd. ed.). *Three hours, first semester.* Professor McCall.

REAL PROPERTY I

Tenure, estates, joint and common ownership, reversions and remainders. Seisin and disseisin. Common law methods of creating and transferring estates. Rents. The statute of uses. Rights in the land itself, and in air and water incident to ownership. Fixtures. Emblements. Waste. Profits, easements, and covenants. Powell's *Cases on Possessory Estates. Three Hours, second semester.* Professor McCall.

TORTS

Principles of tort liability as developed in the action of trespass; justfiication and excuse; negligence as a basis of liability; common law and statutory duties of care; legal cause; contributory negligence; absolute liability; deceit; defamation; malicious prosecution and abuse of process; interference with social and business relations. Bohlen's *Cases on Torts* (3rd ed.). *Three hours, both semesters.* Professor Wettach.

Second and Third Year

CIVIL PROCEDURE II

A consolidation of the problems formerly treated in the courses in code pleading, trial procedure, and a part of trial and office practice. It emphasizes the proceedings in actions brought under the code system of procedure,

from their commencement, through the pleading and trial stages, to appellate review and the enforcement of final judgment. Hinton's *Cases on Code Pleading* (3rd ed.) and *Cases on Trial Practice* (2nd ed.) with assigned problems. *Four hours, both semesters.* Professor McIntosh.

CREDIT TRANSACTIONS

A consolidation of the problems heretofore dealt with in the courses in mortgages, suretyship, and bankruptcy, and a part of sales. Treated from the standpoint of the management of the more common types of credit transactions, from their inception to completion, including the effects of insolvency or bankruptcy. Sturges' *Cases on Credit Transactions. Three hours, both semesters.* Professor Hanft.

EQUITY

The relations between legal and equitable remedies, historically and under modern codes; the subject matter of equitable relief, and the enforcement of equitable decrees, with particular reference to injunctions against torts and crimes and the specific performance of contracts. Durfee's *Cases on Equity. Four hours, second semester.* Professor VanHecke.

INSURANCE

A study of the history and fundamental principles of marine, fire, and life insurance. Special attention is given to the standard fire insurance policy and to preparation for insurance business and practice. Vance's *Cases on Insurance* (2nd ed.). *Two hours, first semester.* Professor Hanft.

MUNICIPAL CORPORATIONS

Constitutional limits within which the cities, counties, and state may operate; functions performed by the various local governmental units; their interlocking, overlapping, and conflicting interests. Tooke's *Cases on Municipal Corporations. Three hours, second semester.* Professor Coates.

NEGOTIABLE INSTRUMENTS

Form and content of checks, drafts, notes, and trade acceptances; their use in the business and banking fields, negotiability, acceptance, and certification; rights of holder in due course and liability of parties; clearance and collection of checks, presentment, notice of dishonor; the provisions of the Negotiable Instruments Law. Britton's *Cases on Bills and Notes* (2nd ed.). *Four hours, first semester.* Professor Breckenridge.

REAL PROPERTY II

Possessory titles. Prescription. Accretion. Mode of conveyances at common law, under the statute of uses, and modern statutes. Execution of deeds. The property conveyed. Creation of easements by implication. A brief review of estates created. Convenants for title. Estoppel by deed. Priorities. Aigler's *Cases on Titles* (2nd. ed.). *Four hours, first semester.* Professor McCall.

WILLS AND ADMINISTRATION

The substantive and adjective law of wills, including descent and the administration of estates. Mechem and Atkinson's *Cases on Wills and Administration. Four hours, second semester.* Professor McCall.

Third Year (see above)

ADMINISTRATION OF DEBTORS' ESTATES

Methods of liquidation of the estates of insolvents; compositions and assignments for the benefits of creditors; receiverships; bankruptcy, administration thereunder. Sturges' *Cases on the Administration of Debtors' Estates. Three hours, second semester.* Professor Hanft.

CONFLICT OF LAWS

This course treats of the principles of international private law; jurisdiction, particularly in connection with the effect of foreign judgments; the applicability of rules derived from foreign or extra-state law in respect to procedure, torts, contracts, quasi-contracts, and domestic relations; and the creation, transfer, etc., of all forms of property. Lorenzen's *Cases on Conflict of Laws* (3rd ed.). *Four hours, second semester.* Professor Wettach.

CONSTITUTIONAL LAW

Judicial function of giving effect to constitutions. The national state and its governmental organization. Citizenship, national and state. Separation and delegation of governmental powers. Due process and equal protection of the laws. Administrative officers and boards. Power of eminent domain. Retroactive laws. Regulation of commerce. Taxation: federal and state. Corporations, especially foreign. The treaty power. McGovney's *Cases on Constitutional Law. Four hours, first semester.* Professor Wettach.

CORPORATIONS

The nature of a corporation; promotion of corporations; corporate powers; corporate liability for torts and crimes; unauthorized corporate action, including doctrines of *de facto* corporations, and *ultra vires* acts; officers, stockholders, and creditors of corporations; reorganization of corporations. Richard's *Cases on Corporations* (2nd. ed.). *Four hours, first semester.* Professor Breckenridge.

CORPORATION FINANCE

The corporation as an instrument of finance and business activity, including corporate contracts, management, and securities; and the processes of corporate financing, including negotiations for capital, investment banking operations, issuance of and market for securities, expansion, and reorganization. Douglas & Shank's *Cases on Corporation Finance. Three hours, second semester.* Professor Breckenridge.

EVIDENCE

Judicial notice. Presumptions and burden of proof. Functions of court and jury. Witnesses: examination, competency, and privilege. Rules of exclusion: evidence illegally obtained; the hearsay rule and its exceptions. Rules as to writings: evidence of authenticity; best evidence rule; parole evidence rule. Opinion evidence. Remote and prejudical evidence. Character and reputation. Thayer's *Cases in Evidence* (Maguire's ed.). *Four hours, second semester.* Professor Chadbourn.

FEDERAL PROCEDURE

The federal judicial system; comparisons and contrasts between state and federal courts, at law and in equity; the law applied by the federal courts; the original jurisdiction of, and procedure in, the U. S. District Court; removal jurisdiction and procedure of the U. S. District Court; venue in the U. S. District Court, appellate jurisdiction, and procedure of the Circuit Court of Appeals and the U. S. Supreme Court; original jurisdiction of the U. S. Supreme Court. Frankfurter and Katz's *Cases on Federal Procedure. Three hours, second semester.* Professor Chadbourn.

LEGAL ETHICS

The history and organization of the legal profession in England and the United States. The lawyer's qualifications. The admission and discipline of lawyers. The ethical duties of lawyers to courts. Ethics of legal employment in general. Solicitation of legal business. The ethical duties of lawyers in criminal and civil cases. Pecuniary relations of lawyers and clients. Hicks' *Organization and Ethics of Bench and Bar. One hour, first semester.* Professor Chadbourn.

PUBLIC UTILITIES

What occupations are public callings at common law and under statutes; duty to supply adequate non-discriminatory service at reasonable rates; right to discontinue service; regulation of rates; commissions. Smith and Dowling's *Cases on Public Utilities. Three hours, first semester.* Professor Hanft.

TRUSTS

The historical development of the trust; the settlor; the creation of the trust relation; the *cestui que* trust; the trustee; the subject matter of the trust; the administration of the trust; creditors' rights. Carey's *Cases on Trusts. Three hours, first semester.* Professor VanHecke.

THE SUMMER SCHOOL

The summer session of the School of Law offers opportunities for students to supplement the work of the regular year by additional courses, some of which are not otherwise available, or to shorten the period of study for the law degree to two regular years and three summer sessions. The summer session is divided into two terms of five and one-half weeks each. Separate credit may usually be obtained for the work of each term. Attendance throughout the entire summer session enables the successful student to obtain credit equivalent to one-third of a regular year's work.

A full curriculum is provided for both beginning and advanced students. The faculty always includes as visiting professors a number of distinguished law teachers from other universities.

An announcement of the program for the 1934 summer session follows:

FIRST TERM, JUNE 13 TO JULY 21

DAMAGES

Charles T. McCormick, Northwestern University.

DEBTORS' ESTATES

Wesley A. Sturges, Yale University.

DOMESTIC RELATIONS

Frank W. Hanft, University of North Carolina.

REAL PROPERTY

Frederick B. McCall, University of North Carolina.

SECOND TERM, JULY 23 TO AUGUST 29

CONFLICT OF LAWS

Walter Wheeler Cook, The Johns Hopkins University.

TAXATION

Henry Rottschaefer, University of Minnesota.

CIVIL PROCEDURE I

James H. Chadbourn, University of North Carolina.

PERSONAL PROPERTY

Robert H. Wettach, University of North Carolina.

THE LAW BUILDING

The Law School occupies Manning Hall, named for John Manning, from 1881 to 1899 a distinguished professor in the School. The building was erected in 1923 and, besides being modern and commodious, is particularly notable for beauty of design.

THE LAW LIBRARY

The library has 27,410 well selected volumes on its shelves. These include the reports of the courts of last resort of all the states either in official volumes or the National Reporter System, and also the United States Supreme Court Reports, The Federal Reporter, The New York Supplement, Illinois Appellate Reports, The English Reports Reprint, The Law Reports (English), The Law Journal Reports, The Law Times Reports, The Times Law Reports, The Dominion Law Reports, the codified laws of each state in the union, the federal and English statutes, and a comprehensive selection of digests, encyclopedias, annotated reports, textbooks, and law journals. It contains, among other material of historical legal interest, the law libraries of Chief Justice Richmond M. Pearson, Chief Justice William A. Hoke, Judge Charles M. Cooke, Judge Charles Thomas, and Judge George T. Willis. The law library was substantially augmented in 1928 by a gift from a former student of the School of $10,000, called the Lucius Polk McGehee Memorial Fund, which was expended for the purchase of books for the law library.

THE NORTH CAROLINA LAW REVIEW

The North Carolina Law Review, issued quarterly, is published by the Law School. It is devoted to the discussion of general and local legal problems and new cases, especially those of interest to North Carolina lawyers. The notes on recent cases are prepared by the student editors, in consultation with faculty advisers. Selection of the student editors is made by the faculty on the basis of scholarship, and membership on the editorial board is the highest scholastic honor attainable by a law student before the graduating year.

The Hill *Law Review* Prize, established by George Watts Hill, Esq., of the Durham Bar, is an award of fifty dollars to the student editor who makes the best total contribution to the *Law Review* during the year. It was won in 1933 by Mr. Frank Parker Spruill, Jr.

FACULTY RESEARCH ASSISTANTS

The faculty selects annually four assistants from the student body who conduct special research under the direction of the faculty. These assistants are chosen for outstanding proficiency demonstrated in their work as students in the School of Law.

The following students served as research assistants during the year 1933-1934: I. E. Erb, R. H. Schnell, and Cecile L. Piltz.

THE ORDER OF THE COIF

In thirty of the leading law schools of this country, conforming to very high standards, chapters of the honorary law school society of the Order of the Coif have been established. Membership is awarded each year to those students of the senior class who throughout their law school careers have attained a standing among the highest ten *per cent.* of their class. In 1933 the following were elected: W. J. Adams, Jr., J. M. Little, Jr., F. P. Spruill, Jr.

ADDITIONAL OPPORTUNITIES OF UNIVERSITY LIFE

Students in the School of Law may be admitted to the courses given in the other departments and schools of the University, subject to the rules stated as to the number of hours which a student may take, and subject to the approval of the Dean of the School of Law. A student taking such a course must satisfy the entrance requirements for the course selected.

As students of the University, they enjoy all privileges of the University library, the University gymnasium, and the organizations of the University generally—literary, social, and athletic.

For information as to loan funds, address *The Dean of Students, The University of North Carolina, Chapel Hill, N. C.*

For further information as to requirements for admissions, or as to living conditions, address *The Dean of Admissions, The University of North Carolina, Chapel Hill, N. C.*

For information as to courses or other matters pertaining particularly to the School of Law, address the *Dean of the School of Law, The University of North Carolina, Chapel Hill, N. C.*

THE SCHOOL OF MEDICINE

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Charles Staples Mangum, A.B., M.D., *Dean.*

*THE ADMINISTRATIVE BOARD

Isaac Hall Manning, M.D.
William DeBerniere MacNider, M.D.
James Bell Bullitt, A.M., M.D.
Wesley Critz George, Ph.D.
Robert Ervin Coker, Ph.D.
James Munsie Bell, Ph.D.
English Bagby, Ph.D.
Herman Glenn Baity, Sc.D.
Daniel Allen MacPherson, Sc.M., Ph.D.

COMMITTEE ON ADMISSIONS AND PROMOTIONS

Charles Staples Mangum, A.B., M.D.
William DeBerniere MacNider, M.D.
James Bell Bullitt, A.M., M.D.
Wesley Critz George, Ph.D.

SPECIAL STAFF

Charles Staples Mangum, A.B., M.D., *Professor of Anatomy.*
Isaac Hall Manning, M.D., *Professor of Physiology.*
William deBerniere MacNider, M.D., *Kenan Research Professor of Pharmacology.*
James Bell Bullitt, A.M., M.D., *Professor of Pathology.*
Wesley Critz George, Ph.D., *Professor of Histology and Embryology.*
John Grover Beard, Ph.G., Ph.M., *Professor of Pharmacy.*
Daniel Allen MacPherson, Sc.M., Ph.D., *Professor of Bacteriology.*
Robert Baker Lawson, M.D., *Associate Professor of Applied Anatomy.*
Evans William McChesney, Ph.D., *Associate Professor of Biological Chemistry.*
Grant Lester Donnelly, A.B. in Educ., M.D., *Associate Professor of Pharmacology.*
George Lunsford Carrington, A.M., M.D., *Instructor in Clinical Microscopy.*
Thomas Henderson Byrnes, B.S., M.D., *Instructor in Pathology.*
Walter Monroe Summerville, *Research Assistant in Pharmacology.*
June Uriah Gunter, A.B., *Assistant in Anatomy.*
Roy Wade Franklin, *Assistant in Anatomy.*

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.

GENERAL STATEMENT

The School of Medicine was established in 1879 under the direction of Dr. Thomas W. Harris. A course in theoretical and practical medicine was offered under the preceptorial system, but the plan was found impracticable and was abandoned in 1886. In 1890, a more orderly and logical arrangement of the subjects in the medical course having developed, it became possible for an institution without clinical facilities to offer instruction in the pre-clinical subjects, and the school was reopened with Dr. Richard H. Whitehead as Dean and Professor of Anatomy. Under his guidance it soon won recognition for thoroughness of instruction and excellence in scholarship and has since continued without interruption to its growth. At first the course covered only one year, but in 1896, the medical course having been extended in the better class of schools to four years, a two-year course was inaugurated. In 1900 the School of Medicine was incorporated as an integral part of the University and was reorganized to meet the requirements of the first two years of the full four-year course leading to the degree of doctor of medicine. In 1902 it was expanded into a four-year school, and the clinical subjects of the third and fourth years were offered in Raleigh under the direction of Dr. Hubert A. Royster as Dean. After a few years of successful operation, this plan had to be abandoned for lack of financial support, and the clinical subjects were dropped. In 1908 the school was admitted to membership in the Association of American Medical Colleges, and is ranked in the class "A" group by the American Medical Association.

The subjects included in the four-year course in medicine are arranged into two main groups, the so-called laboratory and clinical groups, and two years of study are devoted to each. This natural division makes it possible for a student to pursue the laboratory subjects in one institution and the clinical subjects in another without loss of continuity and with no disadvantage. Students who have successfully completed the two-year course in the laboratory group of subjects offered here are prepared to begin the study of the clinical subjects and may be transferred, without examination and with full credit, into the third year of other American Medical Colleges of the highest rank.

The School of Medicine is located on the University campus in a laboratory building, Caldwell Hall, which is equipped to take care of classes of forty men in each of the two years. In addition to laboratories and lecture rooms, this building contains the medical section of the general University library, which for many years has been devoted chiefly to the building up of complete sets of those scientific journals which are concerned with the products of research in the fields covered by the laboratory courses taught in the school.

The students of the Medical School are regularly enrolled in the University, enjoy all the privileges of University students, and are

amenable to all general University regulations and to the special regulations of the Medical School.

REQUIREMENTS FOR ADMISSION

Admission to this School of Medicine requires preparation similar to that specified for admission to all grade "A" school of medicine. The minimum requirements are shown on page 42. The University recommends to each applicant that he prepare himself as fully as his age and resources permit. If possible he should first secure a bachelor's degree, either A.B. or S.B., before beginning his professional study. If this is impracticable, he may secure excellent preparation by completing the academic curriculum outlined on pages 180-181, or may secure the minimum requirements by completing the two years premedical courses suggested on pages 181-182.

Students are earnestly advised not to undertake the study of medicine with merely the minimum requirement of two years of college training. An increasing number of medical schools are requiring at least three years of college work as a prerequisite for transfer into the junior year.

It is to be noted that this school does not contract to admit all students who have completed the three years of academic work prescribed as part of the requirement for the degree of Bachelor of Science in Medicine and outlined on pages 180-181, nor will the University confer such degree upon a student who completes at another institution the prescribed two years of medical work. To those who complete here both the academic and the first two years of medical work there is given the opportunity to obtain a bachelor's degree and the degree of M.D. in seven years.

EXPENSES

See pages 44-47.

SPECIAL NOTICE

An applicant notified of his acceptance must deposit with the Cashier of the University, not later than June 15, a deposit of $50.00; otherwise the acceptance will be withdrawn. If the applicant presents himself for registration and remains in the school during the first quarter, the deposit will be accredited to his account; otherwise the deposit will be forfeited.

SCHOLARSHIPS

THE WOOD SCHOLARSHIP. (Established in 1895.) Mrs. Mary Sprunt Wood, of Wilmington, has founded a scholarship in memory of her husband, the late Dr. Thomas Fanning Wood.

THE PARKER SCHOLARSHIP. (Established in 1930.)

THE MEDICAL CURRICULUM

The medical curriculum covers two years of thirty-four weeks each, divided into three periods, or quarters, of approximately equal length.

First Year

Biological Chemistry: Nine hours a week, winter quarter.

Histology: Six hours a week, fall quarter; nine hours a week, winter quarter.

Gross Anatomy: Twenty-one hours a week, fall quarter; eighteen hours a week, winter quarter.

Neuro-Anatomy: Twelve hours a week, spring quarter.

Embryology: Three hours a week, fall quarter; six hours a week, spring quarter.

Bacteriology: Fifteen hours a week, spring quarter.

Materia Medica: Five hours a week, fall quarter.

Second Year

Biological Chemistry: Six hours a week, fall quarter.

Physiology: Twelve hours a week, fall quarter; twelve hours a week, winter quarter.

Immunology: Nine hours a week, fall quarter.

Pathology: Six hours a week, fall quarter; eight hours a week, winter quarter; twelve hours a week, spring quarter.

Pharmacology: Three hours a week, fall quarter; ten hours a week, winter and spring quarters.

Surgical Anatomy: Six hours a week, spring quarter.

Hygiene: Three hours a week, winter quarter.

Physical Diagnosis: Four hours a week, winter quarter.

Summary of First and Second Year

Subjects	*Hours*
Biological Chemistry	160
Anatomy	750
Physiology	260
Pharmacology	300
Bacteriology and Immunology	250
Pathology	275
Surgical Anatomy	60
Hygiene	33
Physical Diagnosis	40

EXAMINATIONS

The regular examinations in the Medical School are held during the examination periods of the College of Liberal Arts at the close of each quarter. First year students will be allowed special examinations for the removal of conditions during the week preceding the close

of the third quarter, or during the registration week in September.

An examination will not be allowed a student who is charged with ten per cent of unexcused absences, or with absences amounting to twenty per cent of the total number of hours assigned the subject.

PROMOTIONS

If a first year student makes a grade of F on any subject, or a grade of E with failure to remove it by subsequent examination, he will be required to withdraw from the school. A first year student who has been dropped from the Medical School and has returned to college and done creditable work for three quarters may be considered for readmission to the first year class.

If a second-year student makes a grade of E on any subject he may be given another examination on that subject at any subsequent examination period or during the following month of July. If the student is a candidate for S.B. in Medicine and makes a grade of E in his last quarter of residence, he is allowed to take a special examination for removal of the E not earlier than three days after his last examination in that period of examinations. But no student shall be allowed a re-examination on more than one major subject. If he makes an F on any major subject he shall not be allowed a re-examination on any subject. He may be allowed to repeat the second year with the consent of the faculty.

COURSES OF INSTRUCTION

Certain courses in the curriculum of the School of Medicine are approved by the Graduate School as minors for the master's and doctor's degree. For details see under Graduate School.

DEPARTMENT OF ANATOMY

The courses include gross and microscopic anatomy, embryology, the topography of the body, the application and relation of anatomy to medicine and surgery, and the anatomy of the central nervous system and the organs of special sense.

1. GROSS ANATOMY.

Laboratory talks, demonstrations, and conferences take the place of lectures. The student makes a complete dissection of the human body under the constant supervision and direction of an instructor, who insists upon the use of texts, guides, and atlases, and holds practical examinations upon the cadaver. Each student is provided with a complete set of disarticulated bones which he is required to demonstrate. *Twenty-one hours a week, fall quarter; eighteen hours a week, winter quarter.* Professor Mangum; Mr. Franklin.

2. GENERAL HISTOLOGY AND ORGANOLOGY.

Includes: (a) Study of the fundamental tissues, followed by (b) the study of the microscopic structure of the organs of the body, in connection with an examination of gross structure. Lectures, demonstrations, and laboratory. *Six hours a week, fall quarter; nine hours a week, winter quarter.* Professor George; Mr. Gunter. See catalogue of the Graduate School.

3. CYTOLOGY AND HISTOGENESIS.

Those who have completed course 2 or its equivalent will be offered an opportunity to pursue further work in Cytology and Histogenesis. Arrangements for this course may be made with the instructor. Professor George; Mr. Gunter.

4. EMBRYOLOGY.

(a) Lectures and laboratory study of the early processes in the formation of the vertebrate body. (b) Lectures, demonstrations, and laboratory study of mammalian embryos. *Three hours a week, fall quarter; six hours a week, spring quarter.* Professor George; Mr. Gunter. See catalogue of the Graduate School.

5. CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE.

A special laboratory study of the gross and microscopic anatomy of the cord and encephalon. Each student is provided with numerous prepared dissections of the human brain and a series of sections through the cord of the brain stem which he studies with the aid of a guide. A human brain is then given to each group of four men and by them dissected in order to correlate and systematize the work already done. A practical examination tests the student's ability to locate the various tracts and nuclei. *Twelve hours a week, spring quarter.* Professor Mangum. See catalogue of the Graduate School.

6. SURGICAL ANATOMY.

A review of anatomy in its relation to surgical diagnosis and technique. The surface markings of the organs of the body, their location and interrelationship. Incisions for reaching arteries and nerves. Influence of the action of muscles upon fractures and luxations. The application of bandages and splints, and the dressing of wounds. Lectures, X-ray plates, and practical demonstrations upon the cadaver. *Four hours a week, winter and spring quarters.* Associate Professor Lawson.

DEPARTMENT OF BACTERIOLOGY

1. ELEMENTARY BACTERIOLOGY. Prerequisite, Chemistry 1-2 and Botany 1. *Elective.

A lecture and laboratory course offered as a general science course. The fundamental principles of bacteriology are emphasized, and the student is trained in general bacteriological technique. The morphological and biological characteristics of the molds, yeasts, and saprophytic bacteria are studied. Pure cultures are isolated from air and water, and identification attempted. The applications of bacteriology to agriculture, industry, and the home are considered. (Registration of a minimum of six students required.) *Nine hours a week (lectures and laboratory), winter quarter. Laboratory fee, $4.00.* Professor MacPherson.

2. PATHOGENIC BACTERIOLOGY. Required of medical students.

The early weeks of the course are devoted to a thorough grounding in the fundamental principles of bacteriology. Each student prepares the various culture media in common use; cultivates and describes several non-pathogens from stock cultures; and practises the more useful staining methods. Pure cultures are isolated from air and water and their biology studied. The major portion of the course is devoted to the detailed study of the pathogens. Unknown mixtures are used to test the student's ability to differentiate organisms of the various groups. Practical applications of bacteriology in the diagnosis of disease are stressed by the examinations of sputa, pus, feces, and blood.

* Before registering for this course the academic student must secure the permission of his Dean.

Animal inoculations are made to demonstrate the process of infection and the differentiation of certain organisms. Lectures cover all the more important diseases. *Fifteen hours a week (lectures and laboratory), spring quarter. Laboratory fee, for non-medical students, $6.00.* Professor MacPherson. See catalogue of the Graduate School.

3. INFECTION, IMMUNITY, AND SERUM DIAGNOSIS. Required of medical students. Prerequisite, Bacteriology 2 or its equivalent. *Elective.

The early laboratory work is designed to demonstrate the basic principles of immunology and serology. Practical training is given in the production and use of agglutinins, precipitins, lysins, and complement fixing antibodies. Vaccines are prepared, and their use demonstrated. The preparation and standardization of antimicrobic and antitoxic sera are studied. Anaphylaxis and allergy are produced in animals, and methods of diagnosis and desensitization practised. The student is required to prepare his own materials and to inject and bleed animals himself. Special attention is given to the use of these principles in the diagnosis of blood stains, blood grouping, typhoid fever, typhus fever, diphtheria, tuberculosis, hay fever, gonorrhea, and syphilis. Unknown specimens test the student's ability to use the reactions. Lectures consider the principles of infection, immunity, and resistance. *Nine hours a week (lectures and laboratory), fall quarter. Laboratory fee for non-medical students, $10.00.* Professor MacPherson. See catalogue of the Graduate School.

4. PUBLIC HEALTH AND HYGIENE. Prerequisite, Bacteriology 2. *Elective.

Lectures and quizzes on the sources, mode of spread, and control of communicable diseases; ventilation; water and sewage purification; soil pollution; hygiene of foods; carriers; and insect vectors. *Three hours a week, winter quarter.* Professor MacPherson.

5. PUBLIC HEALTH LABORATORY METHODS. Prerequisite, Bacteriology 2 or its equivalent. *Elective.

A course of training in the modern bacteriological methods employed in the routine work of a public health laboratory. Practice is afforded in the laboratory diagnosis of diphtheria, tuberculosis, typhoid fever, pneumonia, malaria, gonorrhea, syphilis, and rabies. The bacteriological examination of water, milk, and canned goods is also practised. The course is designed for medical students, and those wishing to qualify as bacteriological laboratory technicians. *Six hours a week, spring quarter. Laboratory fee for non-medical students, $6.00.* Professor MacPherson.

6. ADVANCED BACTERIOLOGY AND RESEARCH. Prerequisite, Bacteriology 2 or its equivalent. *Elective.

Opportunity and facilities are offered to qualified students to pursue advanced work in bacteriology and immunology. *Hours arranged.* Professor MacPherson.

DEPARTMENT OF PATHOLOGY

1. PATHOLOGY.

Embraces a consideration of general and special pathology from the chemical and physiological as well as the morphological aspects. Lectures and recitations are combined with laboratory work in a study of both gross and microscopical preparations. Each student is supplied with a set of "loan" sections (about 200) which form the basis of the study. This is supplemented by the use of a considerable number of special demonstration sections. A series of practical examinations is held, in which each student is required to diagnose

* Before registering for this course the academic student must secure the permission of his Dean.

the process and describe the salient features in about fifty "unknown" sections. *Six hours a week, fall quarter; eight hours a week, winter quarter; twelve hours a week, spring quarter.* Professor Bullitt.

The class is divided into small sections for attendance upon autopsies at Watts Hospital (Durham). During the past session each section participated in six autopsies. It is expected that this service will be increased. Doctor Byrnes. See catalogue of the Graduate School.

2. CLINICAL MICROSCOPY.

In this course a study is made of blood, urine, sputum, stomach contents, feces, spinal fluid, and various exudates. Some of its content has been partially covered in the courses in Chemistry, Bacteriology, and Pathology, but considerable additional material is supplied and this material is studied in more detail. The student has the opportunity to acquire skill in making these examinations. Emphasis is laid upon the clinical aspects. The work consists chiefly of laboratory exercises but these are supplemented, where necessary, by lectures. *Three hours a week, spring quarter.* Doctor Carrington.

3. ADVANCED PATHOLOGY. Two courses are offered.

(a) Surgical Pathology (prerequisite, Pathology 1); a detailed study of surgical material, with special reference to tumors. (b) Experimental Pathology; production of various inflammatory lesions and study of their development. *Hours by arrangement.* Professor Bullitt.

DEPARTMENT OF PHARMACOLOGY

1. MATERIA MEDICA AND CHEMICAL PHARMACOLOGY.

The course is an integral part of the course in Pharmacology for second year medical students and is a prerequisite to it.

This introductory course has a triple purpose: first, to familiarize students with the physical character and behavior of the official drugs; second, to demonstrate the manner in which these drugs are brought together in making medicinal formulas; and third, to show how these and other drugs may be ordered by means of properly written prescriptions. Classroom and laboratory exercises are regularly held to acquaint students with the appearance and nature of crude drugs, pharmaceutical preparations, and synthetic compounds; while representative types of medicines—tinctures, ointments, pills, etc.—are made by each student in order to gain first-hand knowledge of formula construction. Prescription writing is given careful consideration with particular attention being paid to terminology and incompatibility. *Five hours a week, fall quarter.* Professors Beard, Jacobs.

2. PHARMACOLOGY.

The course in Pharmacology extends throughout the second year of the medical curriculum. The character of the work permits a division of the course into three parts: (a) A consideration of the ways in which drugs may affect the organism. This introduction embraces a discussion of the various physicochemical forces influencing drug activity, and the modification of the action of these conditions in different pathological states of the organism, such, for instance, as febrile conditions and various metabolic disturbances. (b) A general study of the pharmacology of the important drugs. The drugs are considered in groups depending upon their predominant effect in the body. The student learns the preparation, their dose, physiological incompatibilities, and considers in detail the way in which the drugs act as pharmacological agents. The symptoms and treatment of poisoning are considered following the discussion of the pharmacology of the group. (c) A consideration of the pharmacology of the drugs in the pathological animal, with a discussion of the modification of drug activity in various pathological states. In conjunction with this study emphasis is given to the use of drugs as therapeutic agents

and a study is made employing such remedies as are indicated in the form of a prescription. Students are required to write prescriptions, which are then subjected to the criticism of various members of the class and the instructor. Professors MacNider, Donnelly.

3. PHARMACODYNAMICS.

This part of the general course in pharmacology consists in a careful and accurate study of the action of practically all of the more important drugs on animals. For this work, the higher animals, such as the cat and dog, are chiefly used. The class is divided into groups of two or four, and the experimental work is conducted by the student. Each student is required to hand in to the instructor at the completion of the course a laboratory notebook containing a detailed account of each experiment, and explanation of the results obtained, and the tracings made during the experiment. Oral and written recitations are frequently held. *Three hours a week, fall quarter; ten hours a week, winter and spring quarters.* Professors MacNider, Donnelly; Mr. Summerville. See catalogue of the Graduate School.

4. ADVANCED PHARMACOLOGY.

Two types of courses will be offered: (a) an experimental study of the action of various drugs upon the normal animal; (b) an experimental study of the action of various drugs and other agencies upon the pathological animal. *Hours by arrangement.* Professor MacNider.

DEPARTMENT OF PHYSIOLOGY AND BIOLOGICAL CHEMISTRY

1-2. PHYSIOLOGY.

A lecture course for two quarters, in which the functions of the systems of organs are explained and discussed as fully as time permits. The subjects include the digestion, the circulation, respiration, elimination, metabolism, the internal secretions, heat regulation, the nervous system, and the special senses. Attention is called to pathological conditions which are commonly associated with disturbed functions and which emphasize the importance of normal function. *Six hours a week, fall and winter quarters.* Professor Manning. See catalogue of the Graduate School.

3. EXPERIMENTAL PHYSIOLOGY.

A laboratory course during the fall and winter quarters of the second year. Special experiments performed in small sections are carried on in the winter quarter. In this course the student learns the use of physiological apparatus; studies the neuro-muscular system and heart on the frog and turtle; the vascular and respiratory systems on the rabbit and dog; and performs a limited number of experiments on the human, making pulse records, taking blood pressure, determining basal metabolic rates, etc. *Six laboratory hours a week, fall quarter.* Professor Manning. See catalogue of the Graduate School.

4. BIOLOGICAL CHEMISTRY 1.

A lecture and laboratory course in elementary biological chemistry covering the following topics: (1) the physical chemistry of protoplasm, (2) the chemistry of the carbohydrates, fats, and proteins, (3) the chemical composition of foods and body tissues, (4) the scientific principles of nutrition. The laboratory work covers the same general outline as the class-room work. *Three hours lecture and six hours laboratory a week, winter quarter, first year.* Associate Professor McChesney.

5. BIOLOGICAL CHEMISTRY 2.

Chiefly a laboratory course in digestion and analytical methods. The following topics are covered in laboratory: (1) digestion (salivary, gastric, intestinal), (2) pathological urine, (3) quantitative urine analysis, (4) blood analysis (qualitative and quantitative). Occasional lectures are given on the

subjects of digestion and nitrogen metabolism with particular reference to the relation of the latter to the composition of blood and urine. *Six hours a week (lectures and laboratory), fall quarter, second year.* Associate Professor McChesney.

6. BIOLOGICAL CHEMISTRY 3.

An advanced course for graduate students covering aspects of biological chemistry not treated in courses 1 or 2. For details see Catalogue of the Graduate School. *Nine hours a week (lectures and laboratory), spring quarter.* Associate Professor McChesney.

PHYSICAL DIAGNOSIS.

A course in the methods of history taking and physical examination in which particular attention is paid to instructing the student in the normal physical signs. In the second half of the course clinics and demonstrations are held at the State Tubercular Sanatorium and at the State Hospital, at which emphasis is placed on abnormal physical signs of the respiratory and cardio-vascular systems. *Four hours a week, winter and spring quarters.* Associate Professor Lawson.

Lectures are given on clinical problems as applications of preclinical sciences and as an introduction to internal medicine, and the students are taught abnormal physical signs in the Out-Patient Department and wards of Watts Hospital (Durham). Dr. Byrnes and the Medical Staff of Watts Hospital.

THE SCHOOL OF PHARMACY

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
John Grover Beard, Ph.G., Ph.M., *Dean.*

*THE ADMINISTRATIVE BOARD

William deBerniere MacNider, M.D., Sc.D.
James Munsie Bell, Ph.D.
Dudley deWitt Carroll, M.A.
Henry Roland Totten, Ph.D.
Henry Matthew Burlage, Ph.D.
Ira Winfield Rose, Ph.G.
Marion Lee Jacobs, Ph.C., M.Sc.

The Special Staff of Instruction consists of those named above with the addition of other instructors in the Departments of English, French, German, Mathematics, Chemistry, Botany, Bacteriology, Pathology, and Economics and Commerce.

HISTORICAL SKETCH AND DESCRIPTION OF COURSES

In 1880 Dr. Thomas W. Harris was instrumental in establishing a Pharmacy School at the University in connection with the School of Medicine. Doctor Harris was Professor of Anatomy, Materia Medica, and Pharmacy. The course in pharmacy extended over two sessions of five months each, and led to the degree of Graduate in Pharmacy (Ph.G.). The school was continued until the resignation of Doctor Harris in 1886, when it was abandoned completely. In the fall of 1889 the school was revived by Dr. Richard H. Whitehead, but again its career was cut short.

In March of 1897 the present School of Pharmacy was established, and Edward Vernon Howell was elected Professor of Pharmacy, and given charge of the school. At that time the school occupied the ground floor of the New West Building. The first lectures were offered in September of 1897. The course of study extended over two sessions of nine months each and led to the degree of Graduate in Pharmacy (Ph.G.). In the summer of 1912 the school was moved to Person Hall.

In 1917 the school was admitted to membership in the American Association of Colleges of Pharmacy, an organization founded for the promotion of pharmaceutical education. Member-colleges, in order to retain their membership must maintain certain entrance and graduation requirements and must in other ways follow out general practices as determined by the Association.

In order to comply with the Association's requirements the course of study leading to the degree of Graduate in Pharmacy was advanced

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.

in 1925 from two to three years. A four-year course, administered by the School of Applied Science, was added leading to the degree of Bachelor of Science in Pharmacy (S.B. in Phar.). In September, 1932, the three-year course was replaced by a baccalaureate course.

In the fall of 1925 the School of Pharmacy moved into the building formerly occupied by the Department of Chemistry. The building is now known as the Howell Hall of Pharmacy. The school has gradually developed with respect to members of the faculty, equipment, and apparatus. The pharmaceutical library has been made valuable by many historical and modern books on pharmacy and its allied branches and by bound volumes of proceedings and journals, either given by friends or purchased by the University.

The School of Pharmacy recognizes that its graduates may be expected to pursue one or another of three related but definitely different forms of pharmaceutical practice. (1) They may become prescriptionists in or owners of retail drug stores: (2) they may elect to enter the field of medicinal manufacture; or (3) they may decide to establish technical laboratories or enter the U. S. Public Health Service. These different forms of effort require a specialized type of training and the School, in its new curriculum, has attempted to provide such specialization. Certain subject matter, however, is basically necessary regardless of what type of pharmaceutical career is to be followed and the School has accordingly set up a common course for its freshmen and sophomores. At the beginning of the junior year specialization begins through the election by the student of his preferred group of studies. The "A" group of courses is designed for students who expect to become practising retail pharmacists; the "B" group for students who will become manufacturing pharmaceutical chemists; and the "C" group for students who desire training as clinical technicians or who expect to apply for commissions in the U. S. Public Health Service.

REQUIREMENTS FOR ADMISSION

See page 43.

Note. Special course. A few students, who are more than twenty-one years of age and who in the judgment of the Dean are qualified to carry work of college grade, may be admitted for a one year special course of study without the regular requirements for admission. This course is intended to qualify students for license as assistant pharmacists.

EXPENSES

See pages 44-47.

ATTENDANCE AND PROMOTION

Regular attendance upon all classes is required of every student of pharmacy. In any quarter, absences are counted from the first regular

meeting of each class. For other regulations concerning attendance please see pages 61-63, as the same regulations are in force for students in pharmacy as for undergraduate students.

Curricula Leading to the Degree of Bachelor of Science in Pharmacy

In order to be recommended for the degree of Bachelor of Science in Pharmacy the student must have completed one of the four year courses of study outlined below. A student who has completed one or more years of accredited work in a recognized school of Pharmacy and submits satisfactory evidence of having completed the entrance requirements and courses equivalent to those prescribed in the curriculum required for the degree of S.B. in Pharmacy, may be admitted with advanced standing and proceed for this degree. For minimum requirement of residence see page .....

A student must obtain satisfactory marking in attendance, making a grade of D or better in each course.

The number of courses that a student must pass in order to be eligible either for readmission or promotion is explained in the regulation governing undergraduate students found on page..... of this catalogue.

In addition to this regulation the following rule applies to students in pharmacy: No student may be admitted to the junior year if any freshman subject has not been completed.

Curricula Leading to the Degree of S.B. in Pharmacy

Freshman Year

Fall Quarter: Chemistry 1A, English 1, Pharmacy 1, Pharmacy 10, Pharmacy 11.

Winter Quarter: Chemistry 2A, English 2, French 3 or German 3,* Pharmacy 12.

Spring Quarter: Chemistry 31, English 3, French 4 or German 4,* Pharmacy 13.

Sophomore Year

Fall Quarter: Botany 41, Chemistry 41, Pharmacy 21.

Winter Quarter: Botany 42, Chemistry 42, Pharmacy 22.

Spring Quarter: Materia Medica 51, Mathematics 1P, Pharmaceutical Chemistry 43, Physiology 23.

CURRICULUM A

Junior Year

Fall Quarter: Economics 31, Materia Medica 52, Pharmacology 55.

Winter Quarter: Economics 32, Materia Medica 53, Pharmaceutical Chemistry 62, Pharmaceutical Chemistry 64.

Spring Quarter: Commerce 71P, Pharmaceutical Chemistry 63, Pharmacy 83.

* The modern language courses must follow those presented for entrance.

Senior Year

Fall Quarter: First Aid—Materia Medica 56, Pharmaceutical Chemistry 70, Pharmaceutical Chemistry 71, Pharmacy 90, Pharmacy 91.

Winter Quarter: Commerce 61 or 165, Pharmacy 92, Pharmacy 96, Elective.

Spring Quarter: English 51P, Materia Medica 57, Pharmacy 93, Pharmacy 97, Pharmacy 99.

CURRICULUM B

Junior Year

Fall Quarter: Materia Medica 52, Pharmacology 55, Pharmacy 91.

Winter Quarter: Materia Medica 53, Pharmaceutical Chemistry 62, Pharmaceutical Chemistry 64, Pharmacy 92.

Spring Quarter: Chemistry 71, Pharmaceutical Chemistry 63, Pharmaceutical Chemistry 161, Pharmacy 81.

Senior Year

Fall Quarter: Chemistry 163, Pharmaceutical Chemistry 70, Pharmaceutical Chemistry 71, Pharmaceutical Chemistry 162.

Winter Quarter: Botany 52, Pharmaceutical Chemistry 163, Pharmaceutical Chemistry 172, Pharmacy 82, Physics 21.

Spring Quarter: English 51P, Pharmaceutical Chemistry 173, Physics 22.

CURRICULUM C

Junior Year

Fall Quarter: Economics 31, Materia Medica 52, Pharmacology 55.

Winter Quarter: Bacteriology 1, Economics 32, Materia Medica 53, Pharmaceutical Chemistry 62.

Spring Quarter: Bacteriology 2, Pharmaceutical Chemistry 63, Pharmacy 83.

Senior Year

Fall Quarter: Pharmaceutical Chemistry 71, Pharmacy 91, Pharmacy 191, Elective.

Winter Quarter: Botany 52, Pharmaceutical Chemistry 64, Pharmacy 81, Pharmacy 92, Pharmacy 96.

Spring Quarter: English 51P, Pathology 2, Pharmacy 82, Pharmacy 93, Pharmacy 97.

Graduate Work in Pharmacy

The degree of Master of Science in Pharmacy will be conferred on students who have satisfactorily completed approved graduate work extending over not less than one year. This course is administered by the Graduate School and information concerning it may be obtained by addressing the Dean of the Graduate School.

COURSES OF INSTRUCTION

Materia Medica and Pharmacology

1. MATERIA MEDICA AND CHEMICAL PHARMACOLOGY. For a description of this course see School of Medicine.

23. PHYSIOLOGY.

A study of the functions of the normal human body and a consideration of how these functions are modified by the action of drugs. Laboratory experiments are conducted by the instructor to demonstrate the more important physiological reactions of the lower animals, frogs, turtles, and cats. *Three hours a week, spring quarter.* Value, 3 quarter-hours. Professor MacNider.

51-52. MATERIA MEDICA. Prerequisite, Botany 41-42.

The individual drugs of the United States Pharmacopoeia and the National Formulary are considered from the standpoint of their origin, history, appearance, structure, active principles, chief medicinal properties, official preparations, and doses. These drugs are grouped and studied according to the families to which they belong. Later they are classified into therapeutic groups, based on their action. Textbooks: Washburn's *Pharmacognosy and Materia Medica.* Beard's *Therapeutic Terms and Common Diseases.* Lectures and recitations. *Five hours a week, spring and fall quarters.* Value, 10 quarter-hours. Professor Beard.

53. MATERIA MEDICA. Prerequisite, Materia Medica 51-52.

This course is to be considered as a continuation of Materia Medica 51-52. In addition to a more comprehensive study of vegetable and chemical drugs, consideration is given to the animal and biological products which are used in therapeutics. Lectures and recitations. *Three hours a week, winter quarter.* Value, 3 quarter-hours. Professor Beard.

55. PHARMACOLOGY. Prerequisite, Materia Medica 51, Physiology 23; corequisite, Materia Medica 52.

This course is concerned with the physiological and therapeutic action of drugs both upon man and upon lower animals. Prior to this work the student has completed Materia Medica 51 which is concerned with the study of the physical and chemical properties of drugs, their preparations, dosage, and a brief statement of their effect. This course in Pharmacology is intended to amplify and give in a more detailed fashion an understanding of the way in which the drug acts in normal and in toxic quantities. A consideration of the biological standardization of drugs is also a part of this course. Textbook: Bastedo's *Materia Medica, Pharmacology, and Therapeutics.* Lectures and laboratory. *Seven hours a week, fall quarter. Laboratory fee, $5.00.* Value, 5 quarter-hours. Professor MacNider; Assistant.

56. FIRST AID.

This course in First Aid, intended for pharmacy students, will consist of temporary bandaging, methods for the control of hemorrhages, arterial and venous; the functions and use of caustics, styptics, compresses, and plasters; emergency use of hypodermics; procedure in cases of exhaustion, fainting, drowning, chills, exposure, poisoning, burns, and puncture wounds; pulse rate and temperature in all degrees of shock in considering a hurry call for a physician. Lectures and laboratory. *Two hours a week, fall quarter.* Value, 2 quarter-hours. Professor Lawson.

57. BIOLOGICAL PRODUCTS. Prerequisite, Materia Medica 53.

A course dealing with the production, use, and preservation of biological products. *Three hours a week, spring quarter.* Value, 3 quarter-hours. Professor Jacobs.

391, 392, 393. RESEARCH IN MATERIA MEDICA AND PHARMACOGNOSY. Credit: 3 courses.

This course is intended for advanced degrees. Laboratory work with frequent conferences with the major professor; library investigation relating to the subject of research, which is assigned and approved by the professor in charge. *One lecture and nine laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Professors Beard, Totten.

Pharmaceutical Chemistry

43. BLOOD AND URINE ANALYSIS. Prerequisite, Chemistry 42.

This course is designed to acquaint the student with the qualitative and quantitative analysis of blood and urine. Reference: Hawk and Bergeim's *Physiological Chemistry. Two lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Value, 4 quarter-hours. Professor Jacobs; Assistant.

62-63. ORGANIC PHARMACEUTICAL CHEMISTRY. Prerequisite, Chemistry 41-42.

A consideration of the aliphatic and aromatic series. Stress is placed on the compounds of pharmaceutical importance. *Three lecture and six laboratory hours a week, winter and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 12 quarter-hours. Professor Jacobs; Assistant.

64. INORGANIC PHARMACEUTICAL CHEMISTRY. Prerequisite, Chemistry 41-42.

A laboratory and lecture course designed to acquaint the student with the identification tests and general assays of the *United States Pharmacopoeia* and *National Formulary.* Textbook: *United States Pharmacopoeia. Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, $7.50.* Value, 5 quarter-hours. Professor Jacobs; Assistant.

70. TOXICOLOGY. Prerequisite, Pharmaceutical Chemistry 62-63.

A study of the physiological behavior of poisons and the antidotal treatment for the various types of poisoning. The laws regulating the sales of poisons are considered. The laboratory work consists of the separation and identification of poisons in foods and animal tissues. Textbook: Autenrieth and Warren's *Detection of Poisons. One lecture and four laboratory hours a week, fall quarter. Laboratory fee, $5.00.* Value, 3 quarter-hours. Professor Jacobs; Assistant.

71. ORGANIC PHARMACEUTICAL CHEMISTRY. Prerequisite, Pharmaceutical Chemistry 62-63.

A study of the more important medicinal plant products and synthetic drugs. The laboratory work will consist of the isolation, purification, and identification of plant constituents and the synthesis of simple organic medicinal compounds. *Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Value, 6 quarter-hours. Professor Jacobs; Assistant.

141. ADVANCED ORGANIC PHARMACEUTICAL CHEMISTRY. Prerequisite, Pharmaceutical Chemistry 62-63 or equivalent.

A study of the more complex organic compounds used in medicine, emphasizing the structure, chemical relationship, and synthesis of these compounds. *Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Value, 6 quarter-hours. Professor Jacobs.

161-162-163. MEDICINAL PLANT PRODUCTS. Prerequisite, Pharmaceutical Chemistry 62 and 64; corequisite, Pharmaceutical Chemistry 63.

A study of medicinal plant constituents such as volatile oils, alkaloids, etc., with emphasis on their classification, constitution, formation, isolation, identi-

fication, and uses in medicine. *Two lecture and two laboratory hours a week, spring, fall, and winter quarters. Laboratory fee, $7.50 a quarter.* Value, 9 quarter-hours. Professor Burlage.

172. PHARMACEUTICAL ANALYSIS. Prerequisite, Pharmaceutical Chemistry 64.

A laboratory course supplemented by lectures emphasizing the more advanced and special assay methods of the *United States Pharmacopoeia* and *National Formulary. Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, $10.00.* Value, 5 quarter-hours. Professor Jacobs; Assistant.

173. FOOD AND DRUG ANALYSIS. Prerequisite, Pharmaceutical Chemistry 172.

A laboratory and lecture course dealing with the methods employed by government laboratories to control food and drug products. *Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, $10.00.* Value, 5 quarter-hours. Professor Jacobs; Assistant.

242-243. ADVANCED ORGANIC PHARMACEUTICAL CHEMISTRY. Prerequisite, Pharmaceutical Chemistry 141 or equivalent.

A study of the complex synthetic organic medicinal products. Their structure, synthesis, and properties are considered. *One lecture and eight laboratory hours a week, winter and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 10 quarter-hours. Professor Jacobs.

245. ADVANCED TOXICOLOGY. Prerequisite, Pharmaceutical Chemistry 62-63 or equivalent.

The medico-legal aspects of toxicology are considered with particular emphasis on the identification of poisons in cadaverous material. *Two lecture and six laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Value, 5 quarter-hours. Professor Jacobs.

261-262-263. ADVANCED MEDICINAL PLANT CHEMISTRY. Prerequisite, Pharmaceutical Chemistry 161-162-163 or equivalent.

A continuation of Pharmaceutical Chemistry 161-162-163 with special emphasis on and problems dealing with the more complex medicinal plant products. Reading and discussions of the recent advances in this line of work. *Two lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 15 quarter-hours. Professor Burlage.

391, 392, 393. RESEARCH IN PHARMACEUTICAL CHEMISTRY AND MEDICINAL PLANT PRODUCTS. Credit: 3 courses.

Statements regarding Materia Medica 391, 392, 393 apply to this course. *One lecture and nine laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Professors Burlage, Jacobs.

Pharmacy

1. HISTORY OF PHARMACY.

A course designed to develop the historical background of pharmacy. Reports necessitating the use of the library and the preparation of bibliographies on the important figures and historical developments in the profession of pharmacy will be required. *Two hours a week, fall quarter.* Value, 2 quarter-hours. Professor Burlage.

10. PHARMACEUTICAL MATHEMATICS.

It is the purpose of this course so to relate arithmetic and mathematics to pharmacy as to make certain that students can solve correctly the scientific problems met with in dispensing as well as the merchandising calculations that arise in drug store practice. Textbook: Sturmer's *Pharmaceutical Arithmetic. Three hours a week, fall quarter.* Value, 3 quarter-hours. Professor Beard.

11. PHARMACEUTICAL TECHNIQUE.

Lectures deal with the theory and practice of pharmacy. The laboratory acquaints the student with the fundamental manipulations involved. Textbooks: *United States Pharmacopoeia; National Formulary. Two lecture and two laboratory hours a week, fall quarter. Laboratory fee, $3.00.* Value, 3 quarter-hours. Professor Burlage; Assistants.

12. PHARMACEUTICAL TECHNIQUE.

A continuation of Pharmacy 11, this course deals with the more advanced theories and manipulations of pharmacy. Textbooks: *United States Pharmacopoeia; National Formulary. Two lecture and two laboratory hours a week, winter quarter. Laboratory fee, $5.00.* Value, 3 quarter-hours. Professor Burlage; Assistants.

13. PHARMACEUTICAL LATIN.

A certain modicum of Latin is absolutely essential to the understanding of pharmaceutical terminology and to the proper handling of prescriptions. It is the purpose of this course to provide exactly that modicum. Textbook: Howe and Beard's *Latin for Pharmacists. Three hours a week, spring quarter.* Value, 3 quarter-hours. Professor Beard.

21. GALENICAL PHARMACY. Prerequisite, Pharmacy 10, 11, 12.

The official galenicals are studied in the lectures. The laboratory work consists of the preparation of the more important types of official preparations. Textbooks: *United States Pharmacopoeia; National Formulary. Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Value, 5 quarter-hours. Professor Burlage; Assistants.

22. INORGANIC PHARMACY. Prerequisite, Pharmacy 21 and Chemistry 31.

The official inorganic compounds and their use in official preparations are studied in detail. The laboratory work deals with the more important compounds and preparations involving chemical reactions. Textbooks: Rogers' *Inorganic Pharmaceutical Chemistry; United States Pharmacopoeia; National Formulary. Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, $5.00.* Value, 5 quarter-hours. Professor Burlage; Assistants.

81-82. MANUFACTURING PHARMACY. Prerequisite, Pharmacy 22.

The study and manufacture of the more commonly used and complex pharmaceuticals, toiletries, etc. *One lecture and four laboratory hours a week, spring and winter or winter and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 6 quarter-hours. Professor Burlage.

83. ORGANIC PHARMACY AND NEW AND NON-OFFICIAL REMEDIES. Prerequisite, Pharmaceutical Chemistry 62; Corequisite, Pharmaceutical Chemistry 63 or equivalent.

A lecture course designed to familiarize the student with the official organic compounds; the more important compounds and preparations recognized in *New and Non-official Remedies,* published by the American Medical Association, are studied. Textbooks: *United States Pharmacopoeia, National Formulary, New and Non-official Remedies. Five hours a week, spring quarter.* Value, 5 quarter-hours. Professor Burlage.

90. PARASITICIDES.

A course intended to supply information concerning the uses and methods of application of plant materials and chemicals used as insecticides, fungicides, parasiticides, and rodenticides. *Three hours a week, fall quarter.* Value, 3 quarter-hours. Professor Rose.

91-92. DISPENSING. Prerequisite, Pharmacy 22.

A study of the compounding and dispensing of prescriptions. Practice is required in preparing capsules, pills, powders, ointments, etc., until work is satisfactory. *Two lecture and six laboratory hours a week, fall and winter quarters. Laboratory fee, $7.50 a quarter.* Value, 10 quarter-hours. Professor Rose.

93. DISPENSING. (INCOMPATIBILITIES). Prerequisite, Pharmacy 91-92.

The various types of incompatibilities occurring in the compounding of prescriptions are considered and a study made of methods to prevent or render them most acceptable. *One lecture and four laboratory hours a week, spring quarter. Laboratory fee, $5.00.* Value, 3 quarter-hours. Professor Rose.

96-97. COMMERCIAL PHARMACY.

A practical consideration of retail store management and its problems. Executive control, organization, lay-out, merchandising, store policy, personnel, and other phases, including pharmaceutical jurisprudence, are dwelt upon. *Three hours a week, winter and spring quarters.* Value, 6 quarter-hours. Professor Rose.

99. THEORETICAL PHARMACY. Prerequisite, Pharmacy 83.

A course for seniors that is intended to bring together salient subject matter from materia medica, pharmaceutical chemistry, and pharmacy in order that highly important drugs may be studied from every angle. *Lectures and recitations, five hours a week, spring quarter.* Value, 5 quarter-hours. Professor Beard.

141. ADVANCED DISPENSING. Prerequisite, Pharmacy 91-92, 93.

Investigating problems connected with the compounding and dispensing of prescriptions. *One lecture and eight laboratory hours, any quarter. Laboratory fee, $10.00.* Value, 5 quarter-hours. Professor Burlage.

144-145-146. ADVANCED MANUFACTURING PHARMACY. Prerequisite, Pharmacy 81-82 and Pharmaceutical Chemistry 71.

A continuation of Pharmacy 81-82 emphasizing the manufacture and production of volatile oils and aromatic synthetics and their use in perfumes, flavoring extracts, and essences. Toilet preparations and cosmetics also are studied. *Two lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 15 quarter-hours. Professor Burlage.

191. STUDIES OF U. S. P. AND N. F. PREPARATIONS AND ASSAYS.

Critical studies of Pharmacopoeial and National Formulary preparations and official assays. *One lecture and four laboratory hours a week, fall quarter. Laboratory fee, $10.00.* Value, 3 quarter-hours. Members of the Staff.

192-193. STUDIES OF U. S. P. AND N. F. PREPARATIONS AND ASSAYS. Prerequisite, Pharmacy 191.

A continuation of Pharmacy 191. *One lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, $10.00 a quarter.* Value, 6 quarter-hours. Members of the Staff.

351-352-353. SEMINAR. Credit: ½ course.

Required of all graduate students. Reports and discussions relating to recent advances in all branches of pharmacy and related sciences. *One hour a week, fall, winter, and spring quarters.* Members of the Staff.

391, 392, 393. RESEARCH IN PHARMACY. Credit: 3 courses.

Statements regarding Materia Medica 391, 392, 393 apply to this course. *One lecture and nine laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, $10.00 a quarter.* Professor Burlage.

Description of courses in the pharmacy curricula taught in other departments will be found on the following pages:

Bacteriology, 251
Botany, 82
Chemistry, 84, 85
Economics and Commerce, 93, 100, 102.
English, 112, 113
French, 156
German, 125
Mathematics, 139
Pathology, 252
Physics, 147

Drug Store Experience

The North Carolina Board of Pharmacy requires of candidates for license to practice pharmacy evidence of not less than forty-eight months of practical drug store experience. However, it allows the work done in the pharmaceutical laboratories to count in lieu of drug store experience, such credit to be limited to twenty-four months. Up to this limit the college work counts month for month.

PRIZES AND SCHOLARSHIPS

Lehn and Fink Gold Medal. This medal is given annually by Lehn and Fink of New York City for excellence in research work.

Richardson Scholarships. Three scholarships of $85.00 each for tuition have been established by Messrs. H. S. and L. Richardson, of Greensboro. These scholarships are awarded to members of the first, second, and third year classes for excellence in scholarship.

Council Scholarship. This scholarship, amounting to $85.00 a year for tuition, is awarded by Mr. C. T. Council, of Durham, to a deserving student selected by the Dean of the School of Pharmacy and the donor.

Scott Drug Company Scholarship. This scholarship, amounting to $85.00 a year for tuition, is awarded by the Scott Drug Company, of Charlotte, to a meritorious, self-help student.

W. H. King Drug Company Scholarship. This scholarship, amounting to $85.00 for tuition, was awarded for the year 1933-1934, as a means of offering aid to a deserving pharmacy student.

Fairchild Scholarship. Mr. Samuel W. Fairchild, of New York City, offers annually a competitive scholarship amounting to $500.00 in cash to the high school graduates of the United States who wish to follow pharmacy as a vocation. This scholarship will be awarded on the basis of competitive examination given to candidates who are high school graduates and who have successfully finished at least three year's' work in a school or college of pharmacy which is a member of the American Association of Colleges of Pharmacy. Each school, college, or department of pharmacy will be allowed and be limited to two candidates. Application for further information concerning this prize should be made to the Dean of the School of Pharmacy.

THE UNIVERSITY OF NORTH CAROLINA BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

The University of North Carolina Branch of the American Pharmaceutical Association was organized in the fall of 1922 in response to the need of the students for a local society devoted to the scientific and ethical development of pharmacy as a profession.

RHO CHI HONORARY SOCIETY

The Xi Chaper of Rho Chi, national honorary pharmaceutical society, was established at the University of North Carolina in 1929. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy. Eligibility for membership in the Society is based on high attainment in scholarship, character, personality, and leadership. All candidates selected for membership must have completed 75 credit hours of college work, and they must be approved by the Dean of the College of Pharmacy. The Xi Chapter has established a loan fund for deserving pharmacy students and annually adds to the principle of the fund.

THE SCHOOL OF LIBRARY SCIENCE

Frank Porter Graham, M.A., LL.D., D.C.L., D.Litt., *President.*
Susan Grey Akers, Ph.D., *Acting-Director of the School of Library Science and Professor of Library Science.*

*THE ADMINISTRATIVE BOARD

†Edgar Wallace Knight, Ph.D.
Gustave Adolphus Harrer, Ph.D.
George Coffin Taylor, Ph.D.
Robert Bingham Downs, M.S.
Nora Beust, A.M.
Lucile Kelling, B.A., B.L.S.

SPECIAL STAFF

Susan Grey Akers, Ph.D., *Acting-Director of the School and Professor of Library Science.*
Robert Bingham Downs, M.S., *Librarian and Associate Professor of Library Science.*
Nora Beust, A.M., *Assistant Professor of Library Science.*
Lucile Kelling, B.A., B.L.S., *Assistant Professor of Library Science.*

GENERAL STATEMENT

The School of Library Science opened in September, 1931, as a unit of the University of North Carolina. Made possible by a grant from the Carnegie Corporation, it is the culmination of a series of library science courses offered in the summer and regular terms since 1904.

The curricula of the school offer a basic course preparing the student for general library work. Three curricula are offered, permitting the student to specialize in preparation for work in one of three fields: elementary and high school libraries, city and county public libraries, and college and university libraries.

Quarters for the school, comprising laboratory and classrooms for the students and offices for the faculty, are on the third floor of the University library, whose new building was occupied July, 1929. For a description of the University library facilities see page 30.

The town school system maintains a school library and public children's library available for observation. Within driving distance of from thirty minutes to two hours are the city library system of Durham, the libraries of Duke University and its Woman's College, the State Library and the Library Commission headquarters at

* The President, the Registrar, and the Dean of Students are *ex officio* members of each Administrative Board.
† Absent on leave, 1933-1934.

Raleigh, the public library and the libraries of the Woman's College of the University of North Carolina at Greensboro, and the school library systems of Winston-Salem and High Point.

REQUIREMENTS AND RECOMMENDATIONS FOR ADMISSION

The principal requirement for admission is a bachelor's degree from an accredited college or university, with the exception that students of any accredited college or university who can qualify as seniors in this institution will be admitted to the curricula for Public Libraries or School Libraries.

A reading knowledge of French and German is essential to satisfactory work in college and university libraries and very desirable in other types of libraries. It is strongly urged, therefore, that applicants acquire such a reading knowledge before admission to the school.

Students must have reasonable ability in typewriting for admission. A test will be given early in the fall quarter.

Those over thirty-five years of age are advised not to apply for admission to the school unless they have been continuously engaged in library work or some similar pursuit.

Because of the special nature of many phases of library work, it is recommended that before beginning the course, applicants familiarize themselves with library routine and terms, either through practice in a nearby library or by reading.

Applicants must show evidence of ability to do library work and must have had a well-balanced selection of courses leading to the required bachelor's degree.

It is recommended that applicants interview a member of the faculty of the school before admission.

Amount of equipment and size of faculty necessarily limit the enrollment. The class will be chosen on a basis of individual promise of success and previous high scholarship standing.

RECOMMENDED COURSES PREPARATORY TO LIBRARY WORK

It is recommended that intending students include in their curriculum toward a bachelor's degree the following minimum work: French and German to the extent of at least one year's work in college. If this work is taken in high school, it is urged that additional work follow in college. Survey courses in English and American literature; a well-rounded choice of courses in history, including general European history, as well as English and American; a laboratory science, preferably biology; and general introductory courses in economics, political science, sociology, and psychology.

In addition to this general recommendation, the following special courses are advised for those looking toward work in particular libraries: School library group: courses in education (e.g., in curriculum construction and in methods of teaching). Public library and college

library groups: Latin and Greek are useful, especially to those intending to be catalogers.

TIME OF ENTRANCE

Applicants should plan their entrance into the school at the beginning of the fall quarter. Many courses have prerequisites which cannot be taken unless the curriculum is begun at this time. In special cases, however, at the discretion of the Director, students may be admitted at the beginning of either of the later quarters, provided the maximum enrollment has not been reached.

ELECTIVES FOR STUDENTS IN OTHER SCHOOLS

Certain courses are open to seniors in the School of Commerce and the College of Liberal Arts. They are listed under Department of Library Science in Part Three of this catalogue.

DEGREE

On the completion of a curriculum or its equivalent in the School of Library Science, the student will be granted by the University the degree of Bachelor of Arts in Library Science.

COURSE AND RESIDENCE REQUIREMENTS, AND ADVANCED STANDING

Nine courses must be satisfactorily completed in residence in the University of North Carolina for a degree in Library Science. Students who are admitted with advanced standing in library science must complete an equivalent number of courses in the school or another branch of the University.

The residence requirement for a degree is three academic quarters. This requirement must be completed within five years.

SUMMER SESSION

Any courses as prescribed in the one year curricula, which are given in the Summer Session, may be taken with credit toward the degree. Such courses are described in the announcement of the Summer School.

PLACEMENT BUREAU

The School of Library Science does not undertake to find positions for its graduates. It does, however, maintain, in coöperation with the other University bureaus, a placement bureau which endeavors to bring together its graduates and those who wish to employ library workers.

CURRICULA

Public Library Group:—The following courses are prescribed for those who wish to engage in city or county library work:

Fall	*Winter*	*Spring*
101 Cataloging	102 Cataloging	123 Book Selection
111 Reference	112 Reference	141 Administration
121 Book Selection	122 Book Selection	One elective
133 Introduction		

School Library Group:—The following courses are prescribed for those who wish to engage in elementary or high school library work:

Fall	*Winter*	*Spring*
101 Cataloging	102 Cataloging	123 Book Selection
111 Reference	112 Reference	141 Administration
121 Book Selection	122 Book Selection	152 Functions and use of libraries (½ course)
133 Introduction		One elective (½ course)

College and University Library Group:—The following courses are prescribed for those who wish to work in college or university libraries:

Fall	*Winter*	*Spring*
101 Cataloging	102 Cataloging	141 Administration
111 Reference	112 Reference	151 History of Books and Libraries
121 Book Selection	124 Book Selection	One elective
133 Introduction		

APPLICATION FOR ADMISSION

Application for admission to the school should be made on forms which are secured from the Acting-Director, School of Library Science, The University of North Carolina, Chapel Hill, N. C.

SPECIAL CATALOGUE

Detailed information is given in a special catalogue of the School of Library Science. For expenses see pages 44-47.

COURSES OF INSTRUCTION

Course for Undergraduates

61. THE USE OF BOOKS AND LIBRARIES. Credit: 1 course.

A course in bibliography. Instruction is given on the types of information contained in the most frequently useful reference books. Considerable practice is required in finding material in reference works, periodicals, and other literature in the university library. In addition, each student prepares a bibliography on some subject of interest. *Five hours a week, winter quarter.* Professor Downs.

Required Courses for the Degree of Bachelor of Arts in Library Science

101. CATALOGING AND CLASSIFICATION—INTRODUCTION. Credit: 1 course.

This course is planned to give students the theoretical side of cataloging and classification with reference to libraries of different types, sizes, and clienteles. Its objective is to study the problems involved in decisions regarding: (1) the kinds and forms of public and official catalogs; (2) classification

systems, the division of subjects, and the classifying of printed material; (3) subject headings; (4) the arrangement of books on the shelves, and of cards in the catalog; (5) bibliographical detail, including, e.g., forms of names and the use of Library of Congress printed cards and locally made catalog cards; (6) the catalog department's relation to the other departments of the library; (7) the organization and administration of the work of the department, including estimates on the cost of cataloging; and (8) the securing, organizing, and training of the staff of the department. The work will be carried on through lectures, class discussions, problems, projects, readings, individual and group conferences. *Five hours a week, fall quarter.* Professor Akers.

102. CATALOGING AND CLASSIFICATION—SPECIALIZED. Credit: 1 course.

This is a continuation of course 101 and deals with the actual cataloging and classification of books for libraries of different sizes, types, and clienteles. The objectives are (1) to teach the student to classify and assign subject headings, using the classification system and sources for subject headings best adapted to the needs of his chosen community; (2) to teach the student to make and maintain a catalog and other essential cataloging records for a given community; and (3) to teach the student (a) the distinction between professional and clerical duties, (b) the character traits needful for success, (c) the necessary attention to essential detail, and (d) methods of work, in order to facilitate his transition from the work of the classroom to that of the library. The school, public, and college students will meet as one class and will have their laboratory work together, but each student will work with books suitable for his chosen clientele. The work will be carried on through class discussion, case-method, problems, projects, laboratory work, individual and group conferences. *Five class and eight laboratory hours a week, winter quarter.* Professor Akers.

111-112. REFERENCE AND BIBLIOGRAPHY. Credit: 2 courses.

The aim of this course is to familiarize students with the principles of reference work and with the selection and use of basic bibliographical and reference books, public documents, periodicals and periodical indexes. Lectures on the historical development of various classes of bibliographic materials and practical questions involving their use are followed by individual problems and conferences. Extensive practice is given in the selection of reference and bibliographical material for libraries of various types. Mudge, *Guide to Reference Books,* c1929, is used as a text. *Five hours a week, fall and winter quarters.* Professor Kelling.

121. PRINCIPLES OF BOOK SELECTION. Credit: 2 courses.

The object of this course is to cultivate the ability to select literature best adapted to the varying needs of the adult reader in different types of libraries through a study of the underlying principles and practices of approved methods. The work consists of reading, examining, and reviewing selected books by classes, such as literature, history, science, fiction, etc.; a critical study of the principal aids to book selection as tools for practical use in the library; the compiling of selected lists; practice in the writing of book notes; the checking of current book lists; discussion of American publishers; and study of editions. Lectures and discussion groups. *Five hours a week, fall quarter.* Professor Beust.

122. BOOK SELECTION FOR HIGH SCHOOL LIBRARIES. Credit: 1 course.

A survey of adolescent literature and a study of the reading interests of the adolescent, particularly during the high school years. A critical study of

standard and classic books for the adolescent, and of reference books for this age group. Critera for selecting books for adolescents with various reading backgrounds. *Five hours a week, winter quarter.* Professor Beust.

123. BOOK SELECTION FOR CHILDREN'S LIBRARIES. Credit: 1 course.

In general the aim of the course is to acquaint the students with children's reading in order that they may understand the varying appeals that books make to children and thus learn to select books with consideration for the different age groups and differing backgrounds of children. The importance of literature made by children, children's literary tradition, classics, modern and traditional fairy tales, poetry, nursery rhymes, fables and beast tales, myths, epics and sagas, romances, ballads, subject-matter books, illustrated books, books for story-telling, and the history of children's literature are indicated. Practice in the writing of book notes, oral reports, discussions, and lectures. *Five hours a week, spring quarter.* Professor Beust.

124. BOOK SELECTION FOR COLLEGE LIBRARIES. Credit: 1 course.

Continuation of course 121, with emphasis on the needs of the college library. *Five hours a week, winter quarter.* Professor Beust.

133. INTRODUCTION TO LIBRARY WORK.

A series of informal lectures given during the fall quarter will attempt to present the profession of library work to the beginner. During the year demonstrations of library methods and systems through inspection tours, lectures, and exhibits will be offered. This course, for which no credit is given, is required of all students except those admitted to advanced standing who are especially excused. *Throughout the year.* Professor Akers and other lecturers.

141. ADMINISTRATION OF LIBRARIES. Credit: 1 course.

A study of the functions of public, school, and college libraries; the elements of library organization and administration and the variations necessary to special types of service; the library in the community; the inter-relation of work as exemplified by the departments of a large library; finance, personnel, equipment, and buildings; and general book-buying policy. Special projects and discussions. *Five hours a week, spring quarter.* Professor Kelling.

151. HISTORY OF BOOKS AND LIBRARIES. Credit: 1 course.

A survey of the care of books to the present; ancient and medieval libraries; modern library systems, with emphasis on those in England and the United States; important library personalities. The development of written records from prehistoric times to the present day; the forerunners of modern books; the manuscript book; Oriental and European printing; book publishing; book-binding; collectors; etc. Lectures and discussions illustrated with lantern slides and material from the collection of the Hanes Foundation for the Study of the Origin and Development of the Book. Problems, assigned readings, and papers. *Five hours a week, spring quarter.* Professor Downs.

152. FUNCTION AND USE OF LIBRARIES. Credit: ½ course.

This course consists of two parts: I. the functions of public, school, and college libraries, and II. teaching the use of books and libraries. Part I has as its objectives to study the problems involved in determining: (1) the function of the library in the modern school and college, and the relation of the librarian to teachers and pupils; (2) the function of the public library (city or county) and its relation to the community, including the school system. Part II has as its objectives to study the problems involved in decisions regarding: (1) the aims of the course in the use of books and libraries; (2)

the scope; and (3) the best methods of presentation. The work will be given through lectures, class discussions, problems and reading. *Three hours a week, spring quarter.* Professor Akers.

Electives

152. THE CARE AND USE OF LIBRARY MATERIALS. Credit: ½ course.

This course includes the study of: (1) problems involved in indexing, arranging, and caring for non-book material, e.g., picture and map collections; and (2) problems involved in decisions regarding the aims of the course in the use of books and libraries, the scope, and the best methods of presentation. The work will be given through lectures, class discussion, problems, and reading. *Three hours a week, spring quarter.* Professor Akers.

153. LIBRARY WORK WITH CHILDREN. Credit: ½ course.

The aim of this course is to present the organization, administration, and equipment of a children's library. Special attention to problems of book buying and the relation of the children's library to other educational institutions. *Three hours a week, spring quarter.* Professor Beust.

191. SPECIAL PROBLEMS. Credit: to be determined on assignment of work.

a. This course is designed to permit students with a mature outlook to engage in some problem of investigation, associated with library work. Limited to students with advanced standing. *Throughout the year on application.* The faculty of the School.

b. This course continues work in any special phase of Book Selection, Cataloging, or Reference in which a student or group of students is interested—seminar or laboratory project—different groups working under different instructors. *Spring quarter.* The faculty of the School.

Electives from Other Departments

ECONOMICS 71. ECONOMIC STATISTICS. Credit: 1 course.
Three lecture and four laboratory hours a week, every quarter. Laboratory fee, $2.00. Professor Ferger.

EDUCATION 160. CURRICULUM CONSTRUCTION. Credit: 1 course.
Five hours a week, winter quarter. Professor Trabue.

ENGLISH 163. LITERARY CRITICISM. Credit: 1 course.
Five hours a week, spring quarter. Professor Bond.

ENGLISH 331. SEMINAR: BIBLIOGRAPHY. Credit: 1 course.
Two hours a week, fall and winter quarters. Professor Paine.

HISTORY 201ab. HISTOGRAPHY. Credit: ½ course each quarter.
Three hours a week, fall and winter quarters. Professor Caldwell.

PUBLIC ADMINISTRATION 101. PUBLIC ADMINISTRATION. Prerequisite, Bachelor's degree, or three courses in Government, History, Economics, and Sociology. Credit: 1 course.
Fall or spring quarter. Professor Jackson.

SOCIOLOGY 209. SOUTHERN REGIONAL SOCIAL PROBLEMS. Credit: 1 course.
Five hours a week, winter quarter. Professor Odum.

PART SIX

COMMENCEMENT
CATALOGUE OF STUDENTS
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ONE HUNDRED AND THIRTY-EIGHTH COMMENCEMENT
1933

Sunday, June 4th

BACCALAUREATE SERMON, Rt. Rev. Edwin A. Penick
CONCERT—MEMORIAL CHIMES
VESPER SERVICES—Y. M. C. A. SERMON, Dr. W. A. Stanbury
THE ELIJAH, ORATORIO SOCIETY

Monday, June 5th, Alumni Day

MEETING OF THE BOARD OF TRUSTEES
ANNUAL MEETING OF THE ALUMNI
ALUMNI LUNCHEON
FOLK PLAYS, CAROLINA PLAYMAKERS
ALUMNI RECEPTION AND ALUMNI BALL

Tuesday, June 6th, Class Day

SENIOR PRAYERS
CLASS EXERCISES OF THE GRADUATING CLASS
CONTEST FOR THE MANGUM MEDAL
INTER-SOCIETY DEBATE FOR THE BINGHAM MEDAL
TUESDAY EVENING, JUNE 6th, COMMENCEMENT EXERCISES IN KENAN MEMORIAL STADIUM
PRESENTATION OF DIPLOMAS AND ADDRESS BY
His Excellency, John C. B. Ehringhaus
AWARDING OF HONORARY DEGREES

DEGREES IN COURSE

Bachelors of Arts

George Cotton Smith Adams
Joel Barber Adams
Nathan Ames
Francis Irving Anderson
Herbert Allan Anderson
*William Joseph Arthur
Robert Warren Barnett
John Edward Beaudry
†Abe X. Benjamin
Jack Bessen
Sylvia Ruth Blueglass
Henry Armistead Boyd
John Boynton
†John Kredel Burroughs
June Rainsford Butler
Clyde Hull Cantrell
Arlindo Sanders Cate
†Harmon Paine Chamberlin
Eugene G. Chaoush
Whitfield Cobb, Jr.
Henry Groves Connor, III
Edward Victor Conrad
Fannie Porter Cowles
Lacy Augusta Dalton
Emerson Penn Dameron
Elbert Clifton Daniel, Jr.
Andrew Ellicott Douglass
Carl Duncan Downing
Leonard Eisenberg
Alfred Garvin Engstrom
Ellis Daher Fysal
†George Newsome Gleaton
†Jacob Gottlieb
Edward Kidder Graham
Lee Jackson Greer
Isaac C. Griffin, Jr.
†Harold Freeman Grindstaff
Harold Atlee Haines, Jr.
Peter Wilson Hairston, III
Basil Wise Hall
‡†*Joseph deRoulhac Hamilton, Jr.
Betsy Hughes Harding
Finley Gwyn Harper, Jr.
William Harris, II
Frank Morton Hawley, Jr.
Horace Hines
Erwin Jaffe
Samuel Jaffee
†Frederick Henry Koch, Jr.
Dan Mabry Lacy
Virginia Dell Landreth
John Hanes Lassiter
James McQueen Ledbetter, Jr.
Joseph William Lineberger
Betty Gray Long
Lewis Joseph Loveland
Howard Talmage Lyon
Lawrence Sylvester McBride
William Wakefield McKee
James David McNairy, Jr.
John Taylor Manning
Willard McCoy Marley
Robert Henry Mason
Robert Jesse Mebane, Jr.
John Philip Milhous
Elizabeth Vann Moore
Joseph Alfred Morris
Howard Movess Nahikian
Elliott Hill Newcombe
*Mary Frances Parker
Sara Burgwin Parker
William Moore Parsons
Fred Geer Patterson
Joseph Hanan Patterson
Joseph Hyde Pratt, Jr.
Anthony Joseph Prendergast, Jr.
Anna Louise Pritchard
Jane Elizabeth Purrington
John Robert Raper
*John Robert Riley
‖William Gudger Roberts
Charles Grandison Rose, Jr.
Lawrence Sanford Rosenstrauch
Carlos Otto Schoenrich
Katharine Henderson Scoggin
William Vass Shepherd
George Edward Shpack
†Elizabeth Barber Sickles
Louis Cherry Skinner
Arnold Holmes Snider, Jr.
Mattie Dell Snider
William Henry Spradlin, Jr.
Alden Joseph Stahr
Olga Sylvia Stecher
Frances Ellen Milton Stewart
Edna Claire Stroude
§Thomas Walter Teer
†George Irvine Trull
Arthur deTalma Valk, Jr.
George Davis Vick, Jr.
John Edgar Wall, Jr.
Alexander Webb, Jr.
Mandeville Alexander Webb
John Francis Whitehead

---

* In Journalism. † Absent by permission. § In Music.
‖ Deceased—degree granted posthumously. ‡ As of 1932.

Francis Dudley Williams
Emmett Clive Willis, Jr.
*George Wood Wilson, Jr.
Kenneth Stauber Wilson
Walter Howard Wilson
Samuel Byrd Winstead
Lenoir Chambers Wright
Kemp Plummer Yarborough
Harry Edward Robert Yewens, Jr.
†Wilbur Hubbell Young, Jr.
Joseph Goldberg Zaglin
Ida Lee ZumBrunnen

Bachelors of Arts in Education

Jordan Eldred Adams
†Raymond Melvin Ainsley
‡David Paul Beam
Frank Taylor Bender
Bun Benton Bray, Jr.
Julia Bates Brown
William Bryan Byrd
†Alice Alexander Carr
James R. Cox
Edwin Murphy Culpepper
Mary Emma Davis
Warren Thomas Davis, Jr.
Clifford Rae DeHart
Ernest Vick Deans, Jr.
Franklin Taylor Dupree, Jr.
Junius West Durham
Richard L. Eagles
William Claude Fitzgerald, Jr.
Robert Belmont Freeman
Joseph Broadus Henderson
Roy Milburn Hinshaw
Norwood Thomas Hogan
Evelyn Holloman
Ernest Jones Hunter
Sessler Carlysle Isley
†Joseph Edward Johnson
Alonzo Dixon Kornegay
†George Wesley Lewis
Argus Brown Lineberry
Joseph Wallace Long
Edward Cecil Longest
†John Robert McInnis
Raymond T. McKeithan
Marguerite McKinney
Mary Neilson McMillan
‡Grady Mercer
Charles Payne Misenheimer
Nell Melville Montague
Grace Nachamson
Benjamin Franklin Patrick
Closs Courtney Peace
Blair Jenkins Rankin
Thomas Henry Redding
†Talmadge Woody Regan
Robert Benjamin Riddle, III
Joseph C. Robbins
Benjamin Rodin
Laurence Wilson Ross
William Jackson Scott
Mary Winborne Skinner
Anna Spiers
Havens Taylor Spivey
Mae Braxton Strowd
Martha Frances Thomas
James Foster Torbert
Addie Williams Totten
Martha Carstarphen Waldo
Sara March Walser
Ertie Boyd Warren
Anna Gray Watson
Wade D. Whisnant
†Thomas Livingston White
Homer Howard Wike
Colie Vernon Williamson
John Robert Williford
Miriam Carlyle Willis
Katherine Barden Winstead

Bachelors of Science in Chemistry

†William Archibald Biggs, Jr.
Edward Gundrum Egan
Frank Wyman Grant
Elmer Cromwell Powell, Jr.
Norwood Lee Simmons, Jr.
Joseph Allan Suther
Thomas Speight Watson
Henry Jacob Weiland, Jr.

Bachelor of Science in Geology

Charles Lindsey Hunt
†Steve Parker Marsh
Calvert Goosley Peebles, Jr.

---

* In Journalism. † Absent by permission. ‡ As of 1932.

Bachelors of Science in Medicine

James Pettigrew Bunn, Jr.
Cameron McRae, Jr.
Eppie Charles Powell
Solomon Abraham Rabinowitz
John Wren Rea
Charles Dick Rollins
†Fletcher Dover Sain
Joseph Morris Shachtman
Joseph Raymond Strauss
Arthur Fulkerson Toole

Bachelors of Science in Pharmacy

Simon Weil Arenson
†Tad Lincoln McLaughlin

Bachelors of Science in Chemical Engineering

Edward Brenner
Matthew Stuart Morrison, Jr.
John Alfred Preston
Leonard Clement Surprenant
Thomas Russell Taylor, Jr.

Bachelors of Science in Civil Engineering

Albert Curtis Brown
William Albert Burch, Jr.
Frederick Caldwell Cain
Robert Earl Froneberger
John Frank Geiger

Bachelors of Science in Electrical Engineering

Fischer Sheffey Black
Robert Trafford Burnett
Thomas Llewellin Cordle
Thomas Clancy Evans, Jr.
John Emile Hunter
Fred Mitchell Laxton
James Robert Marvin
William Glenn Miller
William Joseph O'Brien, Jr.
Armando Mendez Perez
‡Jacob Sidney Kirk

Bachelors of Science in Mechanical Engineering

†Attilio Emilio Bevacqua
Roberts Kelley Cowhig
Arthur Clarence Furchgott, Jr.
George Wimberley Gorham, Jr.
Charles David Kellenberger, Jr.
John Allan MacLean

Bachelors of Science in Commerce

†Howard Frank Auman
Edgar Alan Bisanar
Irvin Sigmon Blackwood
Stanley Redding Blair
Gilbert Blauman
John McNair Buie
Walter Ennis Collier
†Joel Lawrence Cook
Richard Dozier Lee Covington
Robert Dorsey Davis
Ellis Dudley
Owen Edgar Duncan
Mary Virginia Ferguson
Robert McBride Fleming-Jones
†John McIver Gillespie
John Shelton Gorrell
Walter Lee Gray
Edmond Vincent Hally
Christopher Columbus Hamlet, Jr.
George Henry Hines
John Read Holmes
Robert Bronson Hubbard
†Wofford Forrest Humphries, Jr.
Percy Cornelius Idol
Wiley Earl Mitchelle
‡Bruno Caserio Ferrer Mulieri
Anthony T. Oliverio
Hugh Overstreet, Jr.
Henry Nutt Parsley
William Ward Peetz
Irving S. Peres
Joel Cook Pretlow, Jr.
Zalph Lakey Rochelle
Carroll Pickens Rogers, Jr.
William Lowe Roth
Abbott Newberry Sawyer
James Alexander Shuford, Jr.
James Harold Smith

Crook Graham Stafford
†James Oliver Stallings
Marion Foy Stone
Fred Chalmers Thomas
Jack Thompson
Paul Potter Tilford
Eugene David Umstead, Jr.
Sage Hardin Upshaw
Carl Hermon Wall
Mayer David Weinstein
Thomas Skinner White, Jr.
Robert Jerome Whittington, Jr.
†Noland Elvin Wiggins
†Elmer Vernon Wilkins

Doctors of Law

William Jackson Adams, Jr.
Arch Turner Allen, Jr.
Robert Alexander Hovis
Edwin Marvin Perkins

Bachelors of Laws

James Major Baley, Jr.
Richard Mitchell Chamberlain
William Dunn, Jr.
John Clinton Eudy
John Washington Graham
Lawrence Townley Hammond
James Millard Little, Jr.
Herman Stroupe Merrell
James Osborne Moore
Frank Parker Spruill, Jr.
†Joseph Suisman

Graduates in Pharmacy

†Maurice Milam Brame, Jr.
Elmer William Buchanan
Luther Elmo Bunch
Samuel Gordan Clark
Martin Luther Cline
Clarence Harper Cobb
Leonard Ralph Creech
Uba Frank Crissman
Clayton Smith Curry
Aaron Thomas Griffin
Frank Benton Ham
†Wilbur Leon Hickmon
Fred Morris Moss
Jasper Edward Phillips
Louie Livingston Rouse
Malcolm Thurston Upchurch

Bachelors of Arts in Library Science

Hazel Baity
†Evelyn Estelle Batts
Lella Byrd Beasley
†Margaret Randolph Bullitt
Alberta Williams Bush
Mary Augusta Delamar
Mary Elizabeth Kemp
Martha Matthews McFerrin
John Milton McNeil
Emily Paula Moore
Mary Frances Pate
Eleanor Robinson Pearsall
Alma Stone Skaggs
Wendell Wayne Smiley
Irene Macy Strieby
Eleanor Titsworth
Mary Eleanor Tucker
Icelle Emma Wright

Masters of Science

Howard Chrisco—in Chemical Engineering
William Gannaway Cotrane, Jr.
Lankford Joseph Felton
Arthur Russell Hollett—in Civil Engineering
James Carr Loftin
Simpson Douglas Sumerford
Laura Corbett Thomas
Ralph Duncan Weatherford

Masters of Arts

John McCorkle Akers
Thomas Cicero Amick
Ernest Scott Barr
Mildred Irene Boliek
James Young Causey
John Henry Cowles
Claude Jackson Craven
Virginia Kluttz Crawford
James Milton Early
Sherwood Githens, Jr.

† Absent by permission. ‡ As of 1932.

James Logan Godfrey
Nathaniel Harding Henry
Harriet Bryce Herbert
Joseph Herman Johnson
Jacqueline VanRaden Johnson
Charles Brewer Kestler
†Sallie Oliver Ligon
Lawrence Foushee London
Eugene Frederick McCullough
John Berry McFerrin, Jr.
Leslie Mary Moss (with distinction)
Hubert Vern Park
Sidney Goldwater Roth
Manning Alexander Simons
†Katherine Brittain Smith
Beverly Reid Thurman, Jr. (with distinction)
Sarah Woodall Turlington
Mary Linda Vardell
Alice Evan Walker
James Graham Wall
Delos Donald Wickens
Blanche Zorn

Doctors of Philosophy

William Richardson Abbot, English
Thesis: Studies in the Influence of DuBartas in England, 1584-1641.

Jacob Addlestone, Chemistry
Thesis: A Study of the Soda-Alum System.

Henry Nelson DeWick, Psychology (with distinction).
Thesis: The Relative Recall Effectiveness of Visual and Auditory Presentation of Advertising Material.

Jose Miguel Gallardo, Romance Languages
Thesis: The Individuality of Baltasar Gracian.

Frank William Girlinghouse, Education
Thesis: Reconstruction and Education in Louisiana.

Bernard Lars Johnson, Chemistry
Thesis: A Study of the Aging of Rubber.

George Glenn Killinger, Psychology
Thesis: Emotional Judgments of Music.

Robert White Linker, Romance Languages
Thesis: *La Chevalerie de Ogier de Danemarche* (Lines 1-6000).

Samuel Jesse McCoy, English
Thesis: The Language and Linguistic Interests of Sir Thomas Elyot.

William Milton McLeod, Romance Languages
Thesis: The *Consaus d'amours* and the *Poissance d'amours* of Richard de Fournival.

Orbie Earl Michie, Education
Thesis: An Analysis of the Amount of Training Given Prospective High School Teachers in Certain Types of Teaching Activities and an Evaluation of these Activities for a Teacher-Training Program.

George Wilson Nicholson, Mathematics
Thesis: The Generalized Form of the Lorentz Transformation.

Mathilde Mayer Parlett, English (with distinction)
Thesis: George Eliot and the English Literary Periodical.

Herbert Dale Pegg, History and Government
Thesis: The History of the Whig Party in North Carolina.

Archibald Kenneth Shields, Romance Languages (with distinction)
Thesis: The Madrid Stage 1820-1833.

† Absent by permission.

Charles Newton Sisson, History and Government
Thesis: The Creation, Organization, and Mobilization of the Army of the French Revolution, October 1, 1789, to April 20, 1792.

Marvin Lucian Skaggs, History and Government
Thesis: North Carolina Boundry Disputes Involving Her Southern Line.

Thomas Bradley Stroup, English
Thesis: Type-Characters in the Serious Drama of the Restoration with Special Attention to the Plays of Davenant, Dryden, Lee, and Otway.

HONORARY DEGREES

Doctors of Laws

Charles H. Herty
John S. Hill
Thurman D. Kitchin
Walter L. Lingle

Elected to Phi Beta Kappa, 1933: Honorary—A. W. Hobbs, D. D. Carroll; In course—John T. O'Neil, President; A. B. Andrews II, Vice-President; F. J. Allred, M. T. Barnhill, Jr., T. W. Blackwell, Jr., W. F. Blount, M. J. Brown, Whitfield Cobb, Jr., Ansley Cope, A. G. Engstrom, Sydney Franklin, Frank Ginsberg, W. C. Griffin, C. C. Hamlet, P. R. Hayes, T. T. Herring, W. C. Hewitt, F. D. Higby, Jr., R. M. Hinshaw, J. L. Hunter, S. C. Isley, Ervin Jaffé, R. J. Mebane, Jr., E. G. Michaels, II, E. R. Oettinger, Jr., F. M. Parker, J. H. Patterson, G. E. Shpack, Daniel Weiner, Dudley Williams, W. R. Woerner, C. T. Woollen, Jr., A. K. Shields (Ph.D.), J. K. Barrow, Jr., M. C. Bell, E. D. Cartland, D. B. Fox, J. S. Gentry, F. W. Grant, D. A. Green, W. T. Minor, Jr., C. S. Templeton, R. E. Weathers, Mathilde M. Parlett (Ph.D.), J. S. Guyton, H. G. Schlumberger.

Elected to Sigma Xi, 1933: *Alumnus*—James Stevens Simmons; *Active*—Jacob Addlestone, Henry Nelson DeWick, Bernard Lars Johnson, Robert Dill Norton; *Associate Membership*—Ernest Scott Barr, William Hurt Baskervill, Robert Herschel Belcher, Daniel Brawley, James Milton Early, Granvil Charles Kyker, Joseph Nisbet LeConte, George Wilson Nicholson, Joshua Paul Reynolds, Laura Corbett Thomas, Mary Linda Vardell, Blanche Zorn.

Elected to the Order of the Coif, 1933: W. J. Adams, Jr., J. M. Little, Jr., F. P. Spruill, Jr.

MEDALS, PRIZES, AND FELLOWSHIPS

The Early English Text Society Prize—Samuel Jesse McCoy.
The Eben Alexander Prize in Greek—Eugene G. Chaoush.
The Bryan Prize in Political Science—Robert Mayne Albright.
The Hill Law Review Prize—Frank Parker Spruill, Jr.
The Archibald Henderson Medal in Mathematics—George Julian Koch.
The Mary D. Wright Memorial Prize in Debate—Laurence H. Fountain.
The Patterson Medal—Stuart McVeigh Chandler.
The Ledoux Fellowship in Chemistry—Daniel Johnson Brawley.
Delta Sigma Pi Scholarship Key—Jack Thompson.
Carbis A. Walker Accounting Award—Jack Thompson.
The Mildred Williams Buchan Prize in Philosophy—Laura Eugenia Ross.
The Graham Kenan Fellowship in Philosophy—Whitfield Cobb, Jr., Martha Hurst.
The Algernon Sidney Sullivan Awards—Mary Parker, L. C. Wright, J. O. Harmon.

The Lehn and Fink Medal in Pharmacy—Clarence Harper Cobb.
Honors in History—Dan Mabry Lacy.
Honors in French—Alfred Garvin Engstrom.
The Mangum Medal—Donald Ray Seawell.
The Bingham Prize—Elmer Rosenthal Oettinger, Jr.

DEGREES CONFERRED IN AUGUST 1933

Bachelors of Arts

Eloise Barwick
George Warren Bluegrass
Benjamin Perry Collins
Idus Derrell Felder, Jr.
Jack Smallwood Guyton
Leonard Karesh
Harold Kraus
William Leibowitz
Athleen Leigh Munson
Robert James Novins
Walter Branch Patterson
Benjamin Cabell Philpott, Jr.
Hans George Schlumberger
Madeline Jeannette Thompson

Bachelors of Arts in Education

Claud Miller Andrews
Marshall Cornett Bell
Elizabeth Grier Bolton
Melvin Turner Cameron
John Lacy Deans
Maurice Clinton Ferguson
Ernestine Dorothy Groves
William Lee Hammond
Ira Gillespie Long
Woodrow Wilson Lucas
Herbert Robert Nettles
Samuel Thomas Peace, Jr.
John David Pegram
Richard Quecell Price
Conrad Saylor
Jesse Washington Slaughter
James Alfred Stanley
Virginia Whitridge Stevens
Lucy Mildred Trimble
Anne Leach Turner
George McKinley VanHoy

Bachelor of Science in Chemical Engineering

George Arthur Phillips, Jr.

Bachelors of Science in Medicine

Glenn Simmons Dickson
Charles William Reavis

Bachelors of Science in Commerce

Jack Hardee Boyd
Eugene Fields Brown
Charles Korman

Graduate in Pharmacy

Charles Page Thompson

Bachelors of Laws

Joseph Archibald Cannon, Jr.
DeWitt Clinton McCotter, Jr.
William Clinton Medford
Solomon Bear Sternberger
Huber Topping Taylor

Doctor of Law

Albert Earle Garrett, Jr.

Masters of Science

William Hurt Baskervill
Ruth Bruner Henry
Charles Merritt Lear
James Salen Morrison
Herman Christian Nolen
George Motley Oliver

Masters of Arts

Clarence M. Abernethy
Stanley Thomas Ballenger
Gordon Williams Blackwell
Anne Leslie Chadbourn
Henry Edmunds Coleman
Addison Boyce Collins
Letitia Womack Currie
Camillus Jackson Dismukes
Ora Upshaw Downs
John Stanley Frazer
Walter Gordy
James Miller Grimes, Jr.
Lucy Estes Grimsley
Mary Katherine Harbin
Frances Margaret James
Atkin Burnett Johnson
Lois Johnson
Rufus Franklin Johnson
Paul Gallahar Long
Hilda Flowe McCurdy
Lyles Glenn McNairy
Herman Roscoe Maddox
Donald Stuart Matheson
Martha Serene Mendenhall
Walter Laurens Moses
Willard Vonniver Nix
Billy James Pettis
Mary Fleming Porter
Edna Queener Proffit
Glenn Theodore Proffit
Elise Williams Roberts
Charles Judah Shohan
William Warren Silliman, Jr.
Eugene Rodgers Smith
Sarah Margaret Smith
Frances Lemuel Stansell
Richard Gaither Walser
Jesse Carl Wilson

Doctor of Philosophy

Ruth Hamill Preston

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